SONY®

3-753-192-21 (1)

Trinitron® Color TV

KV-27EXR90

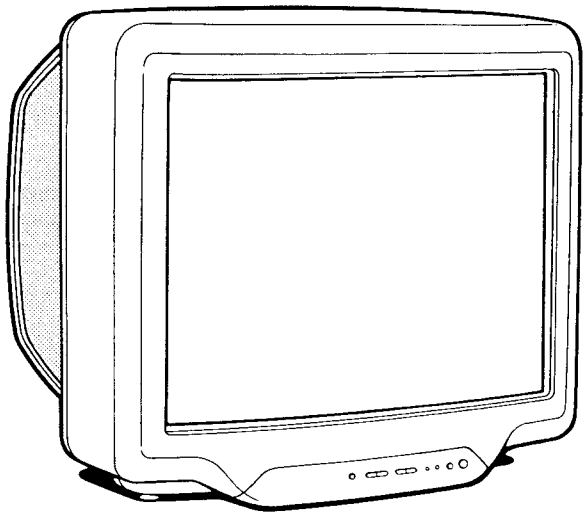
Operating Instructions

Before operating your TV, please read this manual thoroughly and retain it for future reference.

Owner's Record

The model and serial numbers are located at the rear of the TV. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. KV-27EXR90 Serial No. _____



© 1991 by Sony Corporation

Contents

Preface

This section tells you about special features, safety information, and preparatory information for using this manual.

Chapter 1: Set up

This section shows you the steps necessary for installing and presetting your TV.

Chapter 2: Basic Operation

This section gives you basic information about operating and adjusting your TV.

Chapter 3: Advanced Operation

This section shows you how to use the GUIDE on-screen menu and other useful features, and the Remote Commander.

Chapter 4: Other Connections

This section shows you how to connect optional video and audio equipment.

Appendix

This section gives you the specifications and troubleshooting information.

• For a detailed table of contents, see page 3.

Sony Corporation Printed in U.S.A.

Table of Contents

Preface

WARNING/Precautions 2
Features 4
Location of controls 5

Chapter 1: Set up

Connecting TV antenna/cable 8
Presetting TV channels 10

Chapter 2: Basic Operation

Watching TV programs 12
Adjusting picture and sound quality 13
Adjusting the picture 13
Adjusting the sound 16

Chapter 3: Advanced Operation

Using the Remote Commander 18
Using the GUIDE function (on-screen menu) 20
Setting the clock — CURRENT TIME SET . . 20
Setting the ON/OFF TIMER 22
Setting CHANNEL BLOCK 26
Setting VIDEO I.D. 27
Setting CHANNEL CAPTION 29
Enjoying other useful features 32
Muting the sound — MUTING 32
Keeping the channel displayed — DISPLAY 32
Using the sleep timer — SLEEP 32
Switching quickly between 2 channels — JUMP 32
Choosing the picture mode — ASC (Active Signal Correction) 32
Receiving a Multichannel TV Sound program — MTS 33
Receiving lifelike sound reproduction — (●) SRS 33

Chapter 4: Other Connections

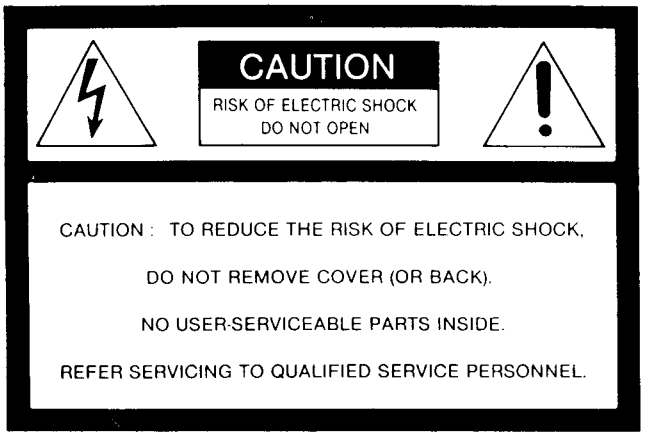
Connecting video equipment 34
Connecting an audio system 37
Connecting extra (not supplied) external speakers 38

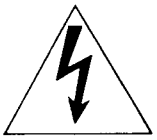
Appendix

Specifications & Troubleshooting 39

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.





This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION:

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

Note to CATV system installer in the U.S.A

This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Use of this television receiver for other than private viewing of programs broadcast on UHF or VHF or transmitted by cable companies for the use of the general public may require authorization from the broadcaster/cable company and/or program owner.

Precautions

Safety

- Operate the TV only on 120 V AC.
- One blade of the plug is wider than the other for safety purposes and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Should any liquid or solid object fall into the cabinet, unplug the TV and have it checked by qualified personnel before operating it any further.
- Unplug the TV from the wall outlet if you are not going to use it for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- Never remove the speakers from the TV.
- Do not pull on the speaker cords.

Installing

- To prevent internal heat build-up, do not block the ventilation openings.
- Do not install the TV in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.
- Do not place objects on top of the TV.

Cleaning

Clean the TV with a soft dry cloth. Never use strong solvents such as thinner or benzine, which might damage the finish of the cabinet.

Repacking

Keep the original carton and packing materials to use for safe transport of your TV in the future.

When repacking, wind the power cord under and over the TV; leaving the cord in contact with the sides may damage the coated finish.

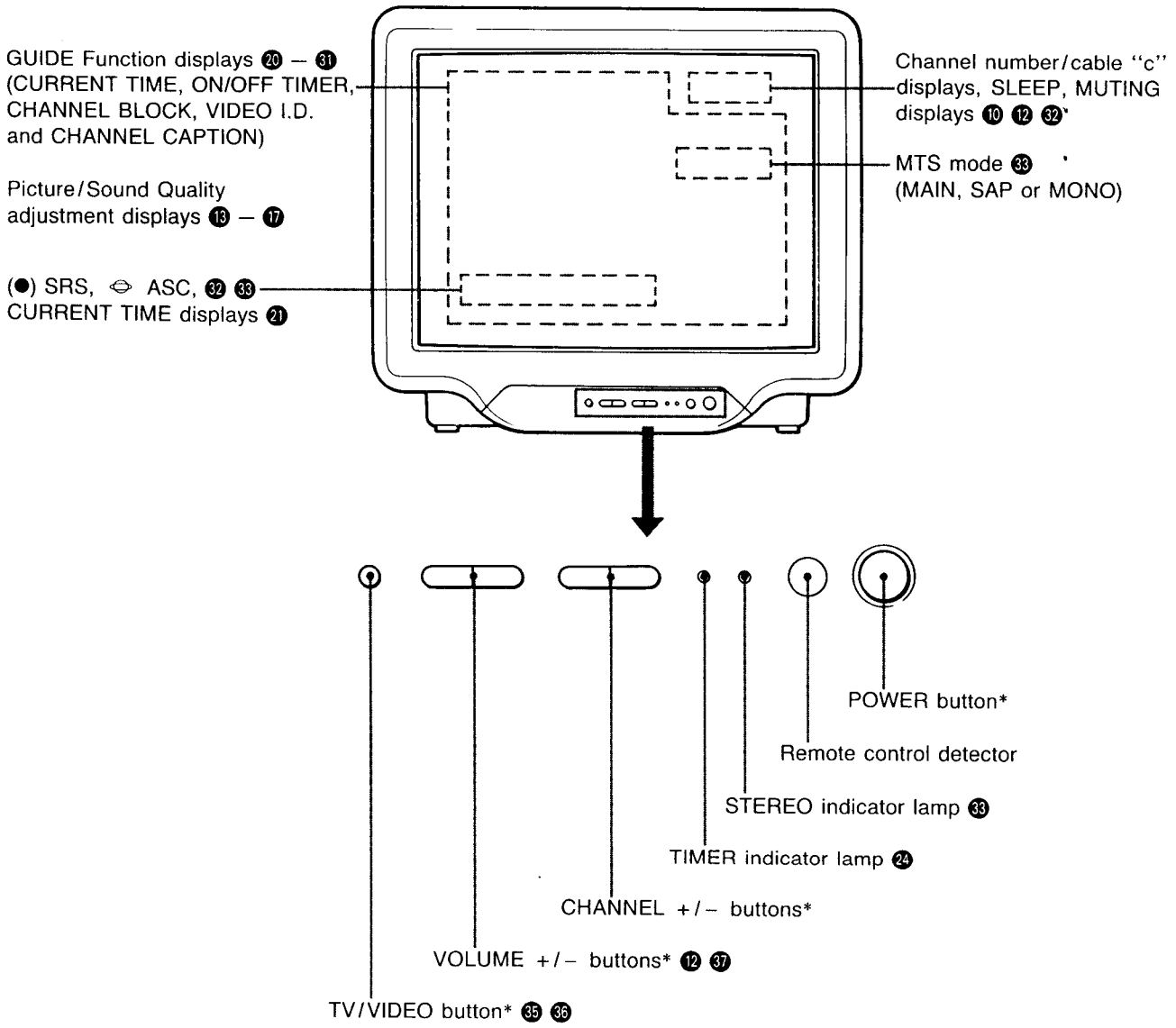
If you have any questions or problems concerning your TV, please contact your nearest Sony dealer.

For details concerning safety precautions, see the supplied leaflet "IMPORTANT SAFEGUARDS."

Location of Controls

Front panel

For details, refer to the pages indicated by the numbered black circles ●



*Buttons with the same function are also located on the Remote Commander (p. 7).

Features

With the following features, you can:

- Receive up to 125 cable channels for a total of 181 possible off-air and cable channels with the **multi-band VHF/UHF/CATV tuner**.
- Receive the picture and sound of your VCR through the **VIDEO IN jacks**.
- Watch superior VCR playback pictures when you connect a VCR equipped with an S video output jack to the **S VIDEO IN jack**.
- Receive stereo programs and Second Audio Program (SAP) broadcasts with the built-in **Multichannel TV Sound (MTS) decoder**.
- Listen to TV or video sound through an audio system, by connecting to the **variable audio output jacks**.
- Record images and sound through the **VIDEO 2 OUT jacks**, by means of VCR equipment connected to the VIDEO 2 IN jacks.
- Reproduce the dynamics of a live performance, with the **(●) SRS (Sound Retrieval System)**.
- Get fine picture quality consistently with the **Active Signal Correction (ASC) system.** The ASC system adjusts the signals and corrects distorted signals over the entire picture.
- Call up an on-screen menu to set the **CURRENT TIME**, **ON/OFF TIMER**, **CHANNEL BLOCK**, **VIDEO I.D.** and **CHANNEL CAPTION**.

With the supplied Remote Commander, you can:

- Operate the TV, plus Sony and other makers' video equipment or Sony multi disc player with the **Pre-Programmed feature**.
- Automatically preset all receivable channels with **AUTO PROGRAM**.
- Switch quickly between two channels, using **JUMP**.
- Set the TV to automatically shut off after approximately one hour, using the **SLEEP timer**.
- Set the internal clock to **DISPLAY** the **current time** on-screen.

And enjoy other features giving you a high quality picture...

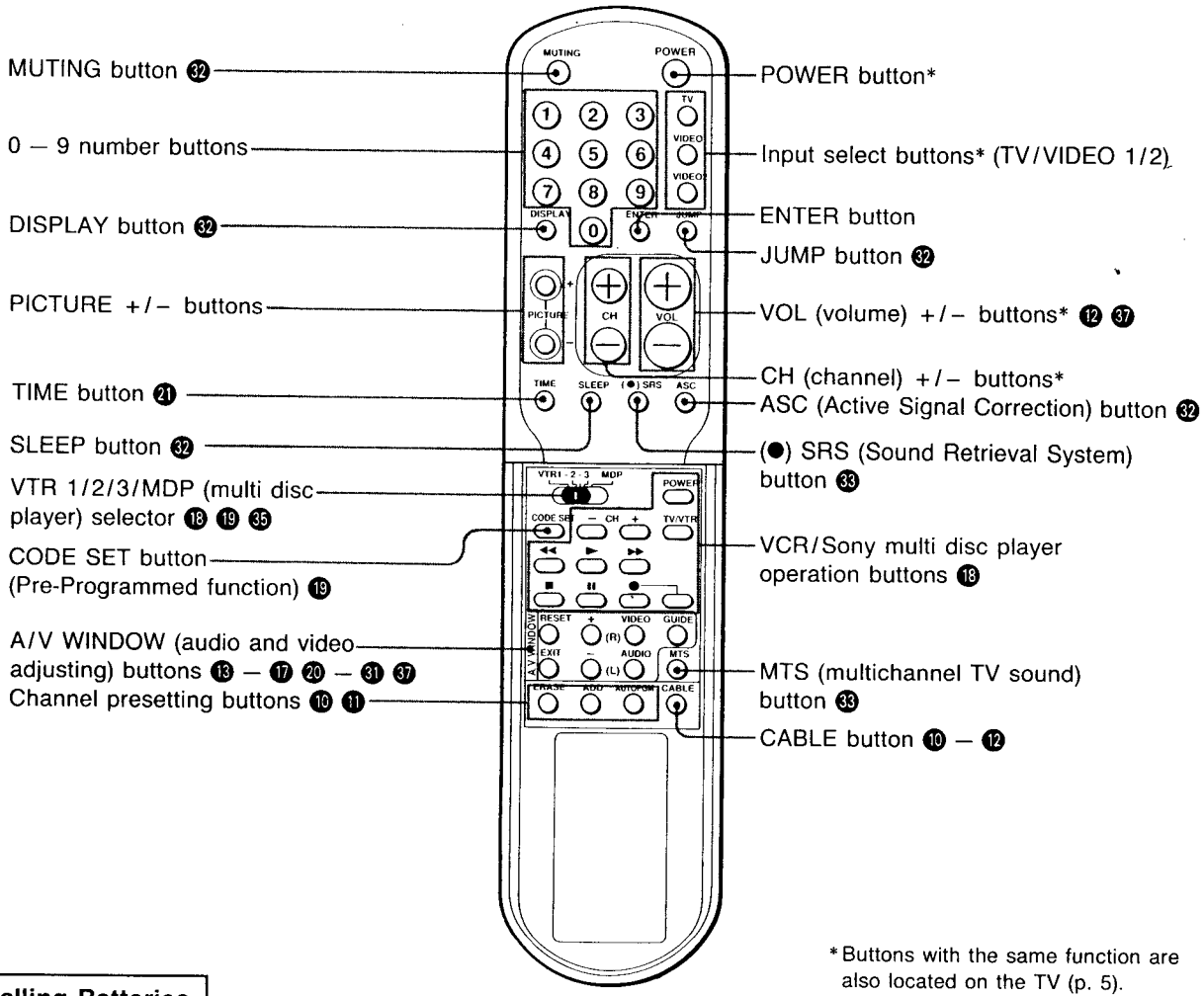
- **New Dynamic picture™ system** adjusts picture contrast automatically, producing more detail in the bright and dark areas of every scene.
- **Trinitone™ control** assures accurate, life-like skin tones and pure whites.
- **Colorpure Filter™** produces fine picture detail without color spill or color noise.

(●) SOUND RETRIEVAL SYSTEM

The (●) Sound Retrieval System is manufactured by Sony Corporation under license from the Hughes Aircraft Company, a subsidiary of GM Hughes Electronics. It is covered by U.S. Patent No. 4,748,669. Other U.S. and foreign patents pending.

(●), Sound Retrieval System and SRS® are trademarks of the Hughes Aircraft Company, a subsidiary of GM Hughes Electronics.

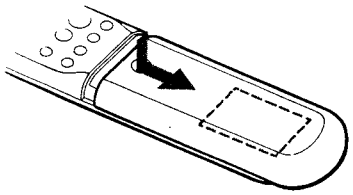
Remote Commander RM-Y105



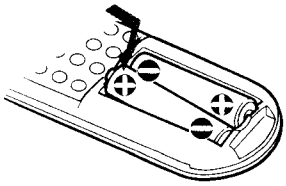
*Buttons with the same function are also located on the TV (p. 5).

Installing Batteries

1 Remove the battery compartment cover.



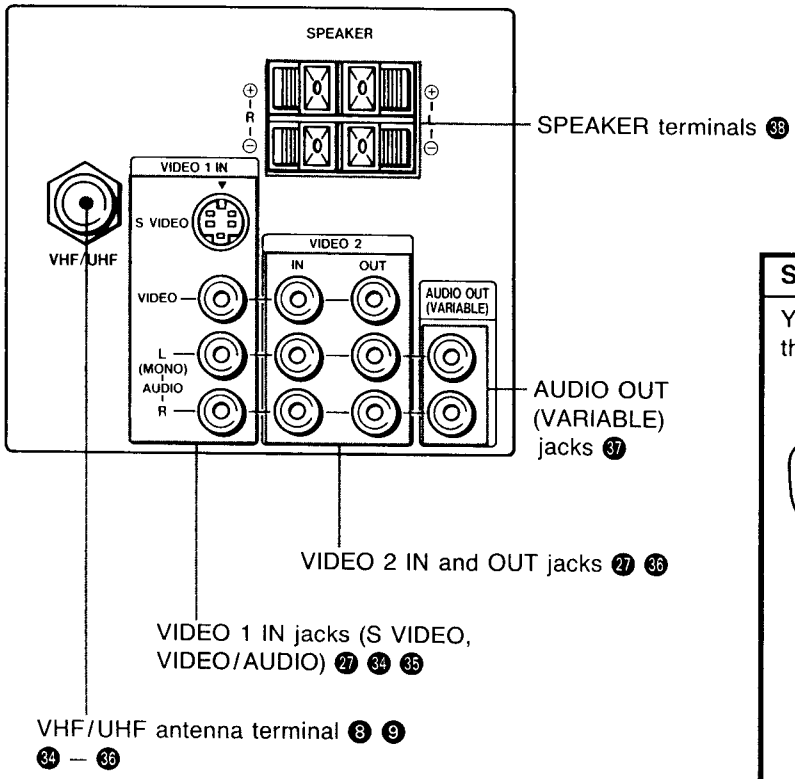
2 Insert two size AA (R6) batteries in correct polarity.



Battery life
With normal operation, batteries will last up to half a year. If the Remote Commander does not operate properly, the batteries might be exhausted. Replace both with new ones.

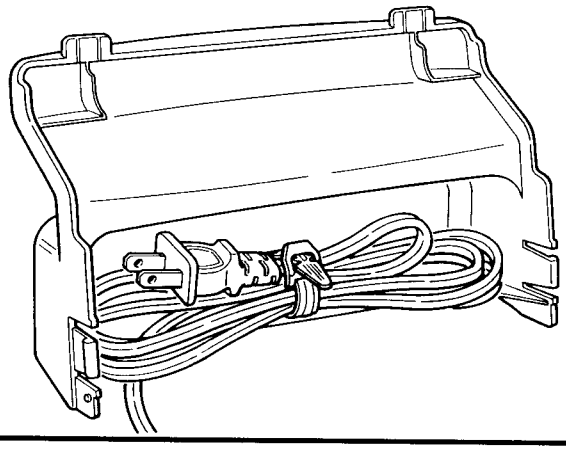
To avoid damage from possible battery leakage
Remove the batteries when the Remote Commander will not be used for a long time.

Rear panel



Storing the AC power cord

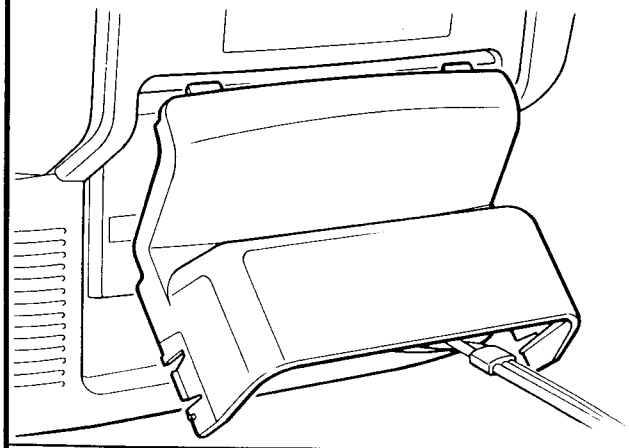
You can store the AC power cord at the rear of the terminal cover, as illustrated here.



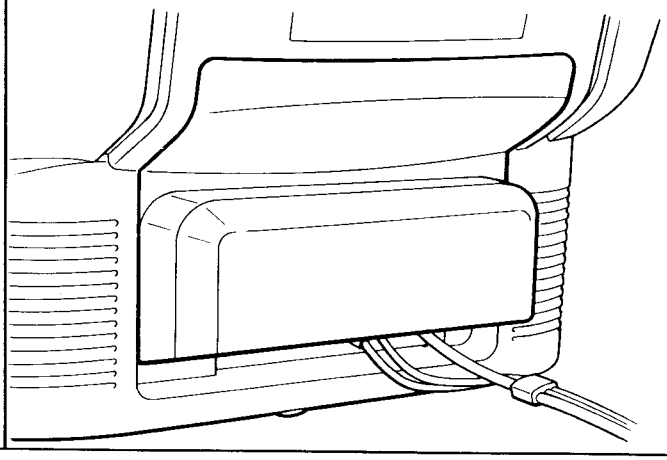
Attaching the terminal cover

The terminal cover comes packed separately from the TV. First connect any optional equipment you want to use with your TV (pp. 34 – 38), then attach the cover as shown below.

1 Insert the two tabs at the top of the terminal cover into the rear panel as shown below.



2 Push the cover onto the rear panel so that the connected cords extend out from the opening at the bottom.



To remove the terminal cover

Pull the cover away from the rear panel to the angle shown in step 1, then pull down to release the cover from the rear panel.

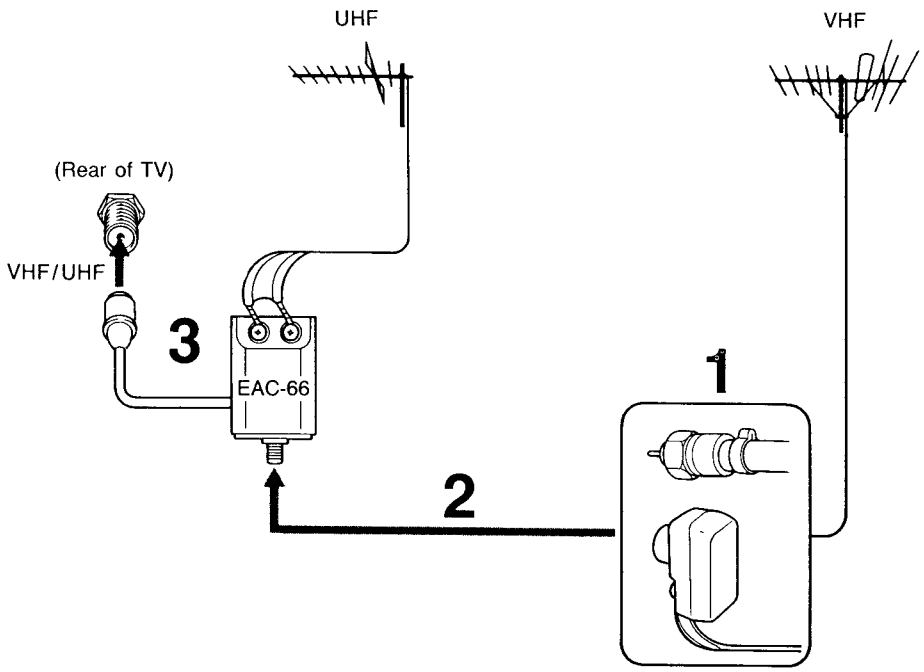
Connecting both VHF and UHF antennas

Use the EAC-66 U/V mixer (not supplied).

1 Prepare the VHF antenna end using the appropriate connector (p. 8).

2 Connect the cables to the mixer.

3 Attach the mixer to the VHF/UHF terminal.



When the U/V mixer is used
Snow and noise may appear in the pictures of the cable TV channels over 37 (W + 1).

Connecting TV Antenna/Cable

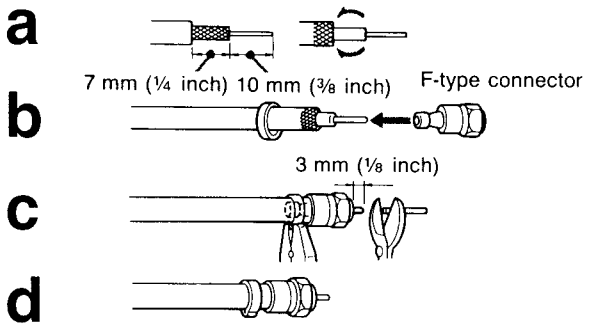
You can use either an indoor or outdoor antenna with your TV.
We recommend using an outdoor antenna for better picture quality.
You can receive cable TV by connecting a cable supplied by your local cable company.

Connecting VHF, UHF or VHF/UHF Combination Antenna*, or CATV Cable

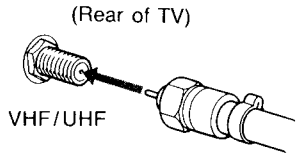
75-ohm coaxial cable (round)

1 Check your antenna cable type and prepare the end of the cable using the F-type connector.

Attach an F-type connector (not supplied).



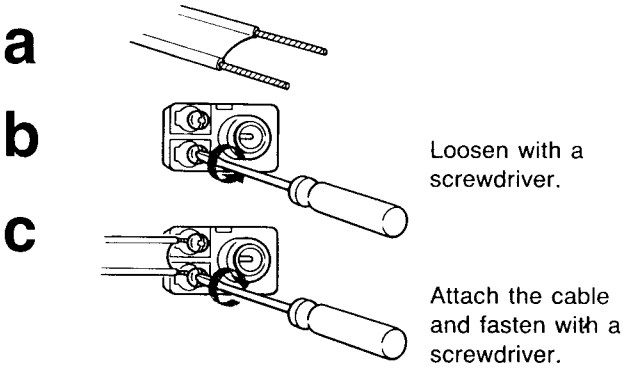
2 Plug the connector into the VHF/UHF terminal at the rear of the TV.



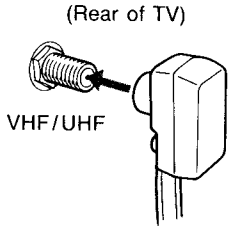
300-ohm twin-lead cable (flat)

1 Check your antenna cable type and prepare the end of the cable using the 300-ohm twin-lead cable.

Attach the supplied antenna connector.

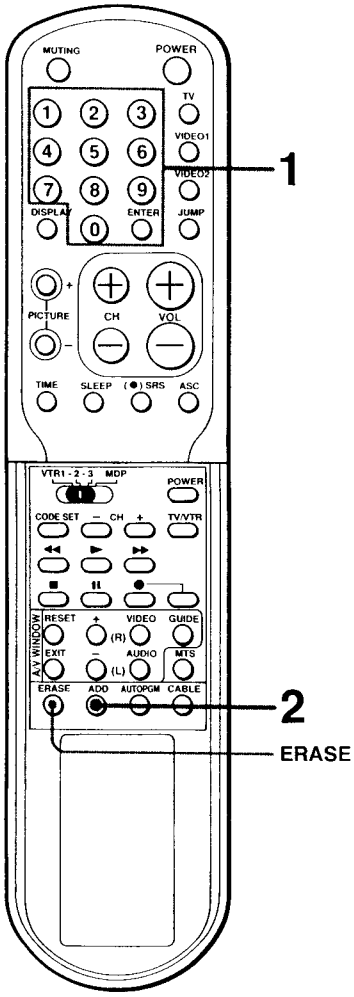


2 Plug the connector into the VHF/UHF terminal at the rear of the TV.

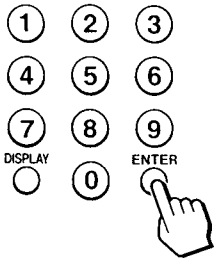


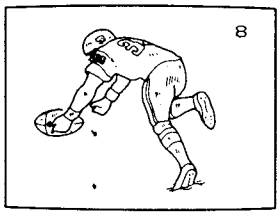
* Most combination antennas are equipped with a signal splitter. Remove the splitter and attach the appropriate connector.

Presetting Only Desired Channels or Erasing Unnecessary Channels

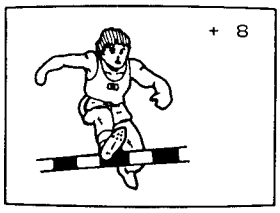


1 Press the 0 – 9 number button(s) and then press ENTER to select the channel you want to add or erase.



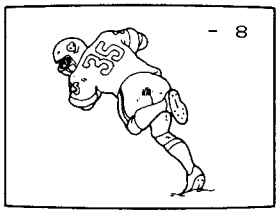


2 To add channels
Press ADD.



A "+" appears before the number for a moment.
This channel has now been added to the channel scan memory.

To erase channels
Press ERASE.



A "–" appears before the number for a moment.
This channel has now been erased from the channel scan memory.
The next time you press the CH +/– button, this channel will be skipped.

Repeat steps 1 and 2 to add or erase other channels.

CAUTION
When a VHF or UHF channel is erased
The cable TV channel with the same number is also erased, and vice versa.

Cable TV channel chart*
Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to the chart below.

Number on this TV	1	5	6	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Corresponding CATV channel	A-8	A-7	A-6	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q

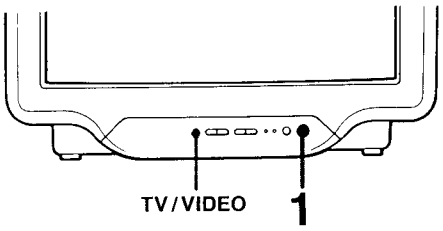
31	32	33	34	35	36	37	38	39	.....	93	94	95	96	97	98	99	100	101	102	.....	123	124	125
R	S	T	U	V	W	W+1	W+2	W+3	.....	W+57	W+58	A-5	A-4	A-3	A-2	A-1	W+59	W+60	W+61	.....	W+82	W+83	W+84

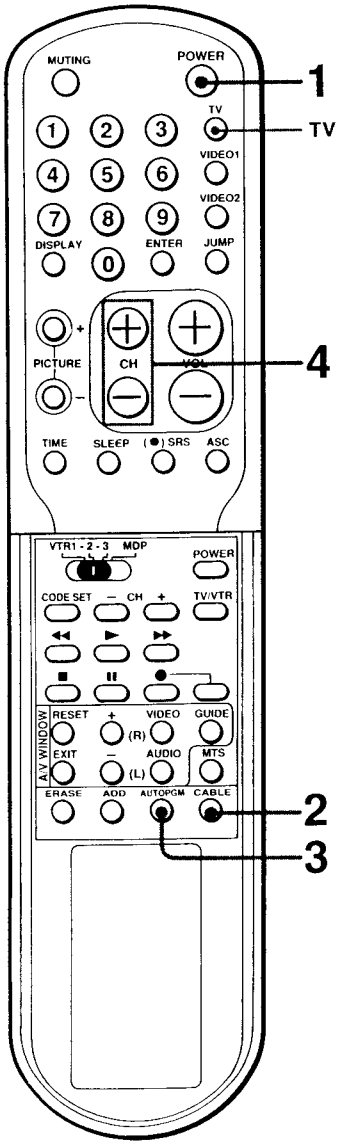
Check with your local cable TV company for more complete information on the available channels.

*This designation of cable TV channels conforms to the EIA/NCTA recommendation.

Presetting TV Channels

Presetting TV Channels Automatically



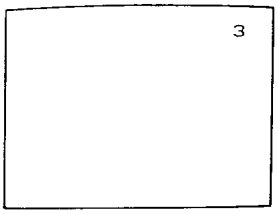


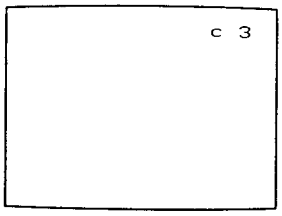
1 Press POWER on the TV or the Remote Commander to turn the TV on.

POWER

2 Press CABLE so that the appropriate mode appears.

CABLE

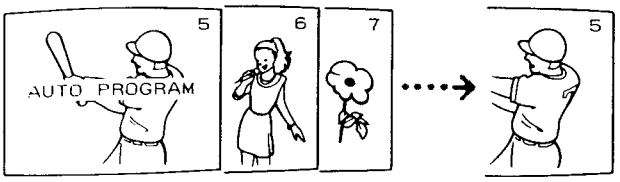




If "VIDEO 1" or "VIDEO 2" is displayed on the screen, press the TV/VIDEO button on the TV or the TV button on the Remote Commander so that a channel number appears.

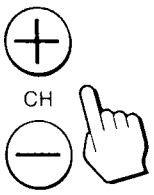
3 Press AUTO PGM.

AUTO PGM



"AUTO PROGRAM" is displayed on the screen and receivable channels (other than the channels already preset) will be preset in numerical sequence. The channels previously preset remain in the TV's memory.
When no more channels can be found, the programming stops and the lowest numbered channel is displayed.

4 Press CH +/– to check or view preset channels.



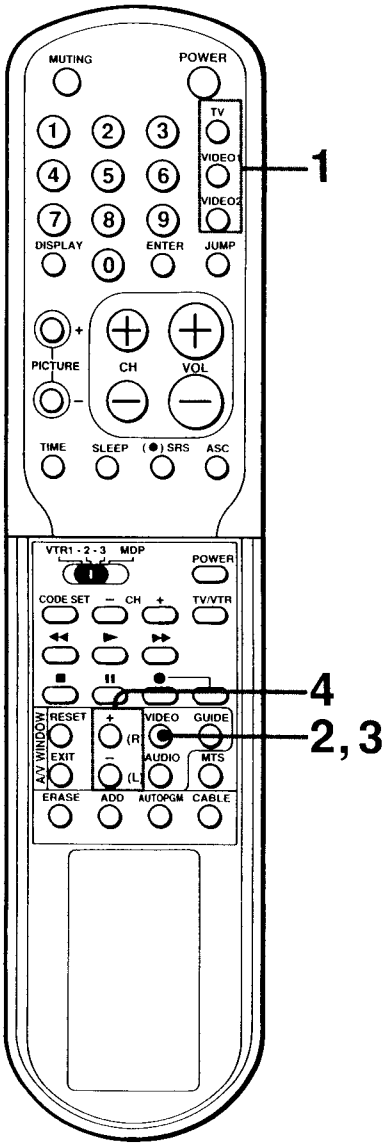
Channels that can be received on this TV:
VHF: 2 – 13 UHF: 14 – 69 Cable: 1 – 125

To add channels that could not be preset automatically because their signal strength was too weak, or to erase unnecessary channels, follow the steps in "Presetting Only Desired Channels or Erasing Unnecessary Channels" on the next page.

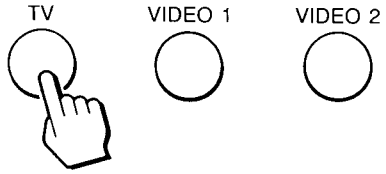
Adjusting Picture and Sound Quality

You can set different picture and sound quality levels for each input mode by changing the input mode (TV/VIDEO 1/2) before setting. These settings will be retained even when you turn the TV off.

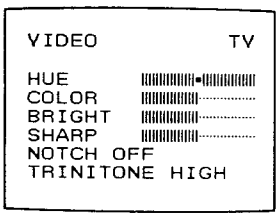
Adjusting the Picture



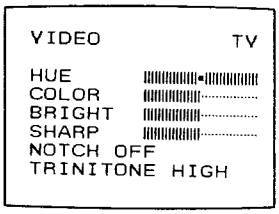
1 Select the input mode you want to adjust with the TV/VIDEO 1/2 buttons.



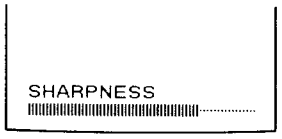
2 Press VIDEO.



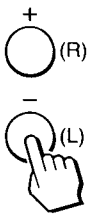
3 Press VIDEO repeatedly until the quality you want turns red.

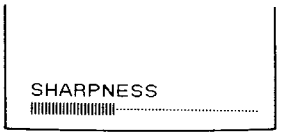


4 Press the A/V WINDOW +/– buttons to make the adjustment.



To increase picture sharpness



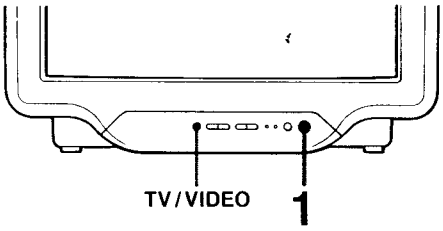


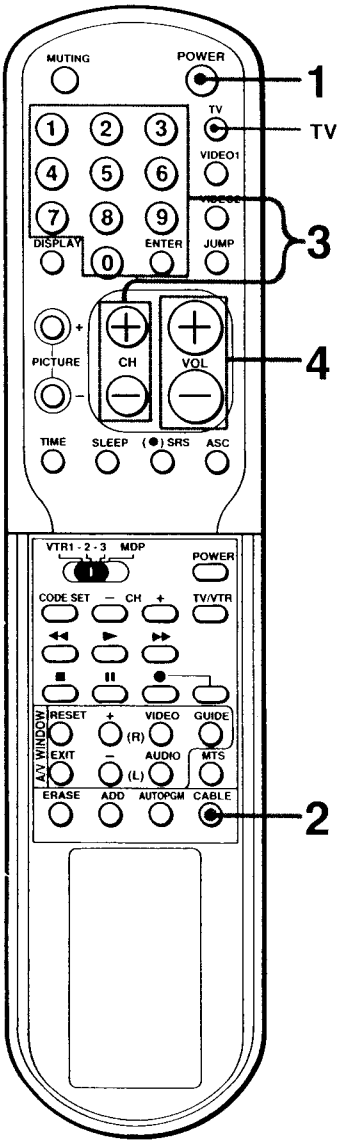
To decrease picture sharpness

Picture quality	Press – (L) button	Press + (R) button
HUE	Skin tones become purplish	Skin tones become greenish
COLOR	For less color intensity	For more color intensity
BRIGHT	For less brightness	For more brightness
SHARP	For less sharpness	For more sharpness

The display will disappear automatically after a few seconds.

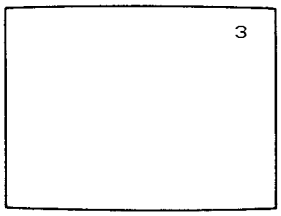
Watching TV Programs



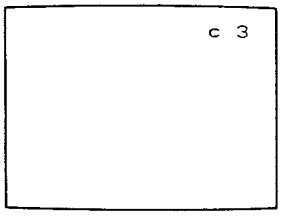


1 Press POWER on the TV or the Remote Commander to turn the TV on.

2 Press CABLE so that the appropriate mode appears.



To view VHF or UHF channels

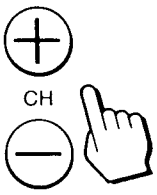


To view cable TV channels

If "VIDEO 1" or "VIDEO 2" is displayed on the screen, press the TV/VIDEO button on the TV or the TV button on the Remote Commander so that a channel number appears.

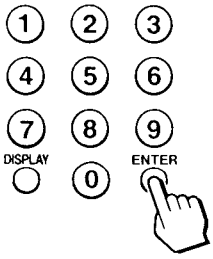
3 Select a channel in one of the following two ways:

To scan the preset channels* in numerical sequence, press CH +/–.

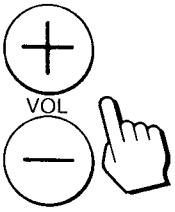


*For more on presetting channels, see p. 10 – 11.

To select a channel directly, press the 0 – 9 number button(s) and then ENTER. For example, to select channel 10, press 1, 0 and ENTER.



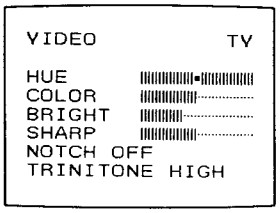
4 Press VOL + or – to adjust the volume.



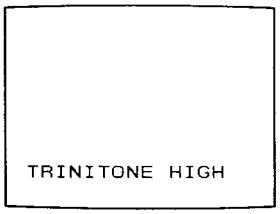
To turn off the TV
Press POWER on the TV or the Remote Commander again.

Making the TRINITONE adjustment

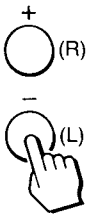
1 Press VIDEO.
Press VIDEO repeatedly until the TRINITONE setting turns red.

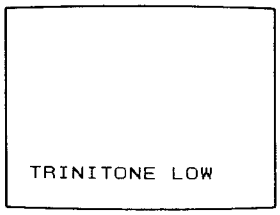


2 Press the A/V WINDOW +/– buttons to select HIGH or LOW.



The factory preset whiteness will be restored.

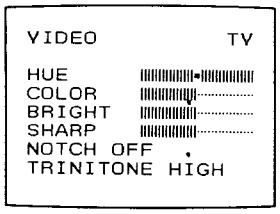




A touch of red will be added to the white areas.

Color picture tubes are usually manufactured with a fixed color temperature (tint) that determines the "warmth" (red tint) or "coolness" (blue tint) of the picture. With Sony's Trinitone feature, you can adjust the picture color to your preference.

To restore the factory settings
Press RESET while in the VIDEO menu screen.
The settings will return to factory-set condition, as shown below.



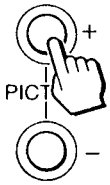
The menu screen will disappear after a few seconds, if you do not press any other buttons.

Note
The picture contrast level cannot be stored under each input mode (p. 13).

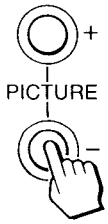
To restore the normal picture
Press EXIT.

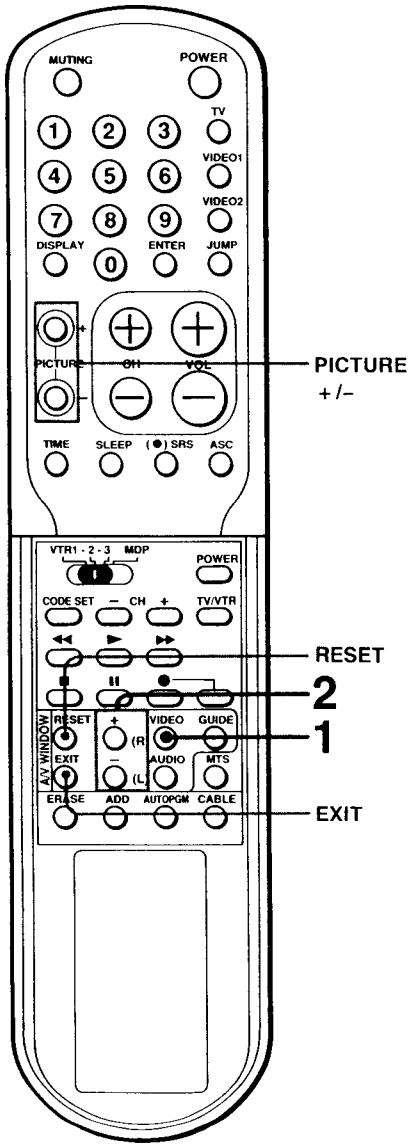
Adjusting the Picture Contrast

Press to increase picture contrast with vivid color.



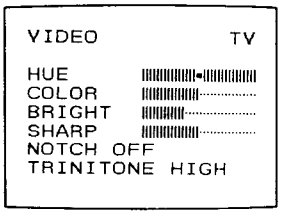
Press to decrease picture contrast with soft color.



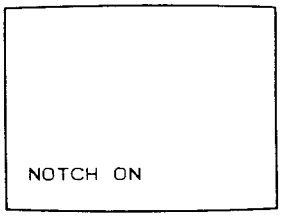


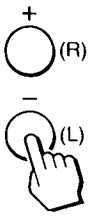
Choosing the NOTCH filter setting

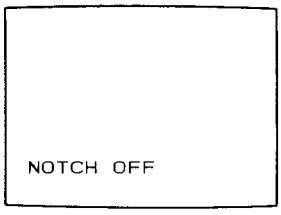
1 Press VIDEO.
Press VIDEO repeatedly until the NOTCH setting turns red.



2 Press the A/V WINDOW +/– buttons to select ON or OFF.



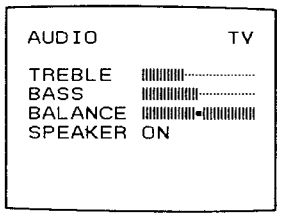




Under normal conditions, set NOTCH OFF.
If dots or stripes appear while you are watching an image from a computer or video source, set to NOTCH ON.

Turning SPEAKER ON/OFF

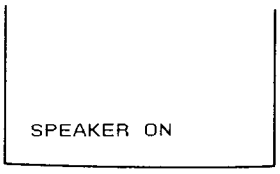
Press AUDIO.
Press AUDIO repeatedly until the SPEAKER setting turns red.



To turn the speakers ON

Press +.

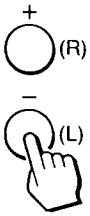
Turn ON to use the speakers connected to the SPEAKER terminal.

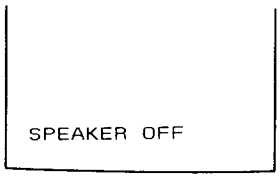


To turn the speakers OFF

Press –.

Turn OFF to use an audio system connected to the AUDIO OUT jacks.

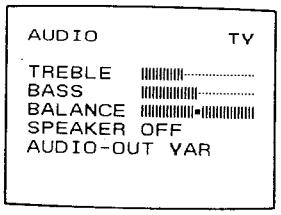




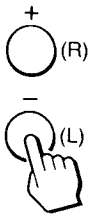
In AUDIO-OUT VAR (VARIABLE) mode, you can adjust the audio qualities with the TV controls.

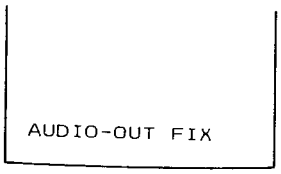
To change to AUDIO-OUT FIX mode

Press AUDIO.
Make sure that the SPEAKER OFF setting is selected.
Press AUDIO repeatedly until the AUDIO-OUT setting turns red.



Press –.





VOLUME is set to maximum, and TREBLE, BASS and BALANCE are set to center levels. You can only make adjustments with the external equipment controls.

To change to AUDIO-OUT VAR mode

Press +.

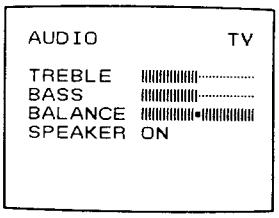
Note

When you turn SPEAKER from OFF to ON, AUDIO-OUT FIX mode switches automatically to AUDIO-OUT VAR mode, and VOLUME, TREBLE, BASS and BALANCE settings prior to AUDIO-OUT FIX settings are restored.

To restore the factory settings

Press RESET while in the AUDIO menu screen.

The factory-set condition will be restored, as shown below.

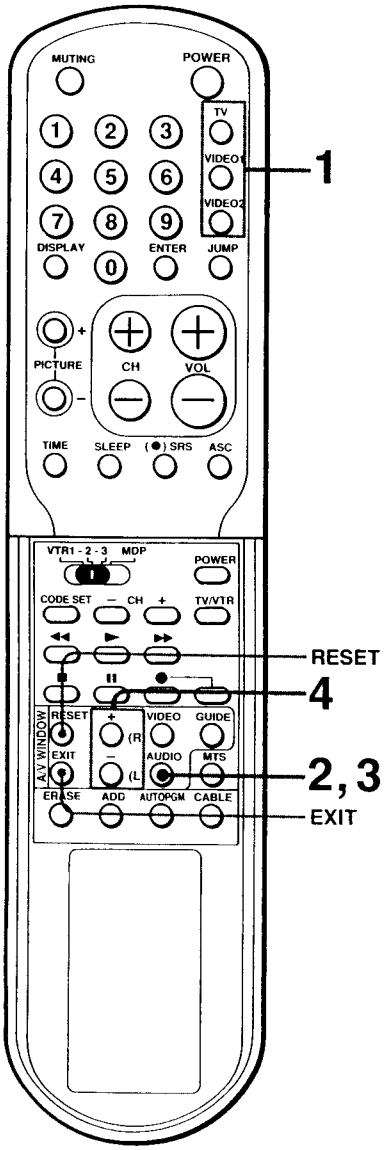


The screen menu will disappear after a few seconds, if you do not press any other buttons.

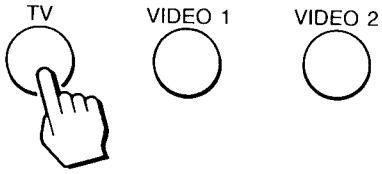
To restore the normal picture

Press EXIT.

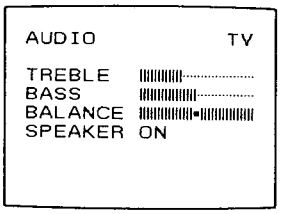
Adjusting the Sound



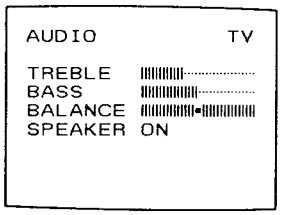
1 Select the input mode you want to adjust with the TV/VIDEO 1/2 buttons.



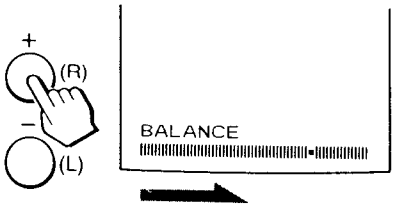
2 Press AUDIO.



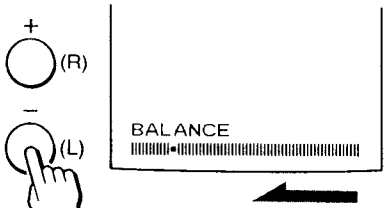
3 Press AUDIO repeatedly until the quality you want to adjust turns red.



4 Press the A/V WINDOW +/– buttons to make the adjustment.



To emphasize the right speaker's volume



To emphasize the left speaker's volume

Sound quality	Press – (L) button	Press + (R) button
TREBLE	To decrease treble response	To increase treble response
BASS	To decrease bass response	To increase bass response
BALANCE	To emphasize the left speaker's volume	To emphasize the right speaker's volume

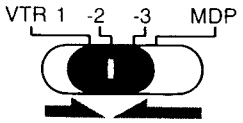
The displays will disappear automatically after a few seconds.

Operating Non-Sony or Sony Video Equipment (Pre-Programmed Function)

With the supplied Remote Commander, you can operate non-Sony or Sony video equipment as shown below.

Example: To operate an RCA video cassette recorder when you set the VTR 1/2/3/MDP selector to VTR 2.

1 Set the VTR 1/2/3/MDP selector to VTR 2.

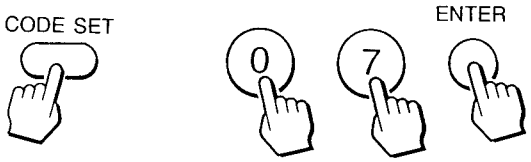


*You can use the VTR 1/2/3 settings, but not MDP.**
By employing these three settings, you can use your Remote Commander to operate up to 3 pieces of equipment.

To use another manufacturer's equipment besides a Sony VTR, set the selector to a position not being used for your Sony video equipment.

**Set the selector to MDP only to use your Sony multi-disc player.*

2 While pressing CODE SET, press the number buttons for your manufacturer's code number (see charts). For RCA, press 0, 7 and ENTER.



Now you can operate the video equipment with the supplied Remote Commander.

Notes

- If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.
- If you enter a new code number, the code number previously entered at that setting will be erased.

3 Use the video operating buttons to operate video equipment (see the chart on p. 18).

For your convenience

Write the manufacturer name and code number for your equipment onto one of the supplied self-adhesive labels and affix to the Remote Commander for easy reference.

	BRAND	CODE
1		
2		
3		

Manufacturers and Code Numbers (VCR)

MANUFACTURER	CODE
SONY	01, 02, 03
CANON	05
EMERSON	22, 30, 33
FISHER	10, 11, 12, 15
FUNAI	29
GENERAL ELECTRIC	05, 08
GOLDSTAR	25
HITACHI	07, 08
JVC	16
MAGNAVOX	05, 06, 09
MITSUBISHI	18, 19, 26, 27
MULTITECH	29
NEC	16, 23, 31
PANASONIC	05, 06
PHILCO	05, 06
PHILIPS	05, 06, 09
QUASAR	05, 06
RCA	07, 08
SAMSUNG	24, 32
SANYO	11, 15
SCOTT	21
SHARP	13, 14
SHINTOM	34
SYLVANIA	05, 06, 09
SYMPHONIC	29
TEKNIKA	28, 29
TOSHIBA	20, 21
TOTE VISION	25
ZENITH	17

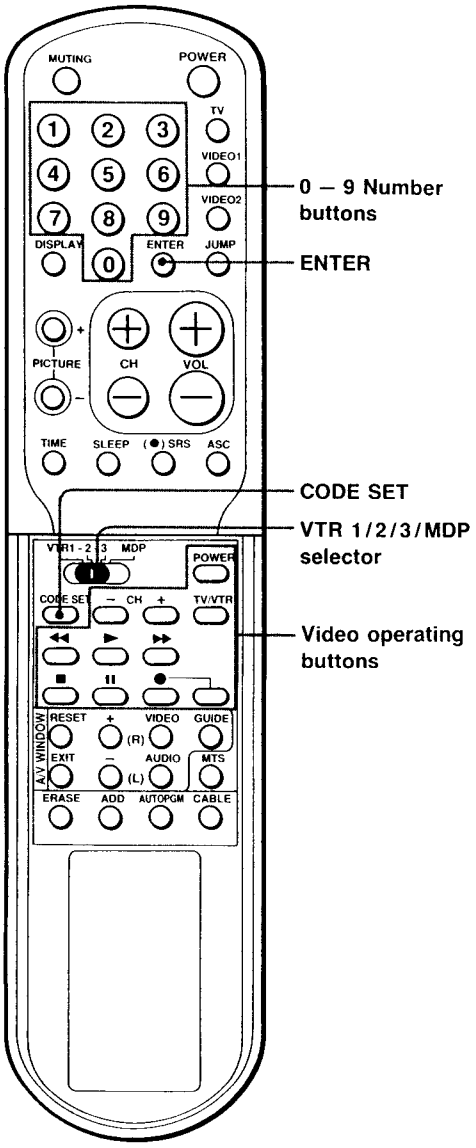
The code numbers for Sony equipment are assigned as follows:

01 .... Beta, ED Beta VCR
02 .... 8 mm VCR
03 .... VHS VCR

Using the Remote Commander

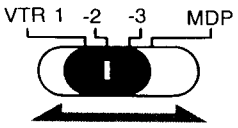
You can operate other video equipment that has an infrared remote detector with this supplied Remote Commander.

Operating Sony Video Equipment



With the supplied Remote Commander, you can operate Sony video cassette recorders (Beta, 8 mm, VHS) and multi disc players by following the steps below.

1 Set the VTR 1/2/3/MDP selector according to the video equipment you want to operate.



If you want to operate a:	set to:
Beta, ED Beta VCR	VTR 1
8 mm VCR	VTR 2
VHS VCR	VTR 3
Video disc player	MDP

2 Use the video operating buttons to operate video equipment.

Operating a Video Cassette Recorder

To record	Press ● button and the button to its right simultaneously.
To play	Press ►.
To stop	Press ■.
To fast forward	Press ►►.
To rewind the tape	press ◄◄.
To pause	Press ❚❚. *To resume normal playback, press again.*
To search the picture forward and backward	Keep pressing ►► or ◄◄ during playback. *To resume normal playback, release the button.*

Operating a Video Disc Player

To play	Press ►.
To stop	Press ■.
To pause	Press ❚❚. *To resume normal playback, press again.* *This function is effective only for CAV (standard-play disc). With CLV (extended-play disc), the TV will go into the standby mode if ❚❚ is pressed.
To search the picture forward and backward	Keep pressing ►► or ◄◄ during playback. *To resume normal playback, release the button.*

Notes

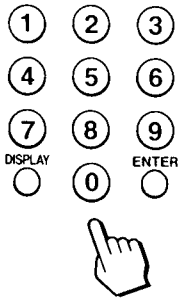
- If you use only Sony video equipment with your TV, you can operate that equipment following the steps on this page only. However, if you use other makers' video equipment as well as Sony's, please follow the steps on p. 19 instead (Pre-Programmed function).
- If the video equipment does not have a certain function, the corresponding button on this Remote Commander will not operate.

Caution

When you replace the batteries, do it within approximately 30 minutes. Otherwise Sony equipment settings and the settings you made under the Pre-Programmed function (p. 19) may be erased.

5

Press 0 – 9 to set the current time.
For example, to set 5:30, press 0, 5, 3 and 0. (You must press 4 digits.)




```
CURRENT TIME SET

  MON 05:30 AM

SET THE CURRENT
TIME.
PLEASE USE [0-9]
&[ENTER].
```

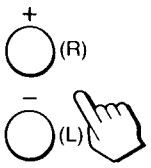
6

Press ENTER.

```
CURRENT TIME SET

  MON 05:30 AM

SELECT AM OR PM.
PLEASE USE[+][-]
&[ENTER].
```

7

Press +/– to set AM or PM.




```
CURRENT TIME SET

  MON 05:30 PM

SELECT AM OR PM.
PLEASE USE[+][-]
&[ENTER].
```

8

Press ENTER.
The moment you press ENTER, the internal clock will start.
The screen display will indicate that the clock has been set.
The display will disappear automatically after about 5 seconds.

```
CURRENT TIME SET

  MON _5:30 PM

CURRENT TIME IS
SET. THANK YOU.
```

To clear the current time setting
Call up the "CURRENT TIME SET" page (steps 1 and 2, p. 20); press RESET, then EXIT.

To reset the setting
Call up the "CURRENT TIME SET" page; press RESET, then repeat steps 3 to 8.

To display the current time
Press TIME.

To restore the normal picture
Press EXIT.

Notes

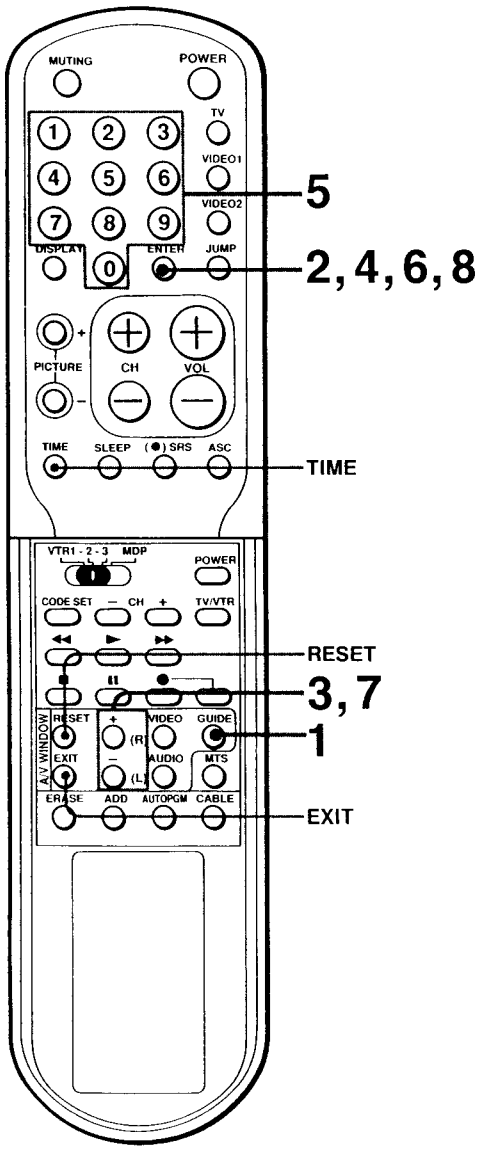
- The ON/OFF TIMER and CHANNEL BLOCK will operate only if the clock is set correctly.
- The internal clock of this TV operates on a 12-hour cycle. If you enter a 24-hour cycle number, it will be cleared when you press ENTER.

12:00 AM stands for midnight. 12:00 PM stands for noon.

- If you unplug the TV, or if a power failure occurs, all settings will be erased from the TV's memory, and the internal clock will return to the factory-set condition. Follow steps 1 – 8 to reset the current time.

Using the GUIDE Function (on-screen menu)

Use the GUIDE function to call up the on-screen menu, which gives you instructions on how to set the CURRENT TIME, ON/OFF TIMER, CHANNEL BLOCK, VIDEO I.D. and CHANNEL CAPTION.



Setting the Clock — CURRENT TIME SET

Example: Set the clock to Monday, 5:30 PM.

1 Press GUIDE.
Press repeatedly until the "CURRENT TIME SET" display turns red.

GUIDE

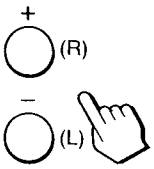
```
GUIDE

CURRENT TIME SET
ON/OFF TIMER
CHANNEL BLOCK
VIDEO I.D.
CHANNEL CAPTION
```

2 Press ENTER.

ENTER

```
CURRENT TIME SET

  SUN __:__ AM

SELECT TODAY'S
DAY.
PLEASE USE[+][-]
&[ENTER].
```

3 Press the A/V WINDOW +/− buttons to select the day of the week.



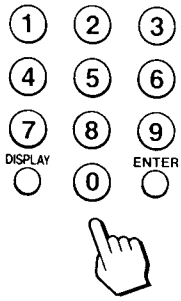

```
CURRENT TIME SET

  MON __:__ AM

SELECT TODAY'S
DAY.
PLEASE USE[+][-]
&[ENTER].
```

4 Press ENTER.
(If the time is already set, the time currently set will appear. Press any number to clear the time.)

ENTER

```
CURRENT TIME SET

  MON __:__ AM

SET THE CURRENT
TIME.
PLEASE USE [0-9]
&[ENTER].
```

5 Press 0 — 9 to set the desired time.
For example, to set 1:00, press 0, 1, 0 and 0. (You must press 4 digits.)

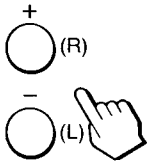



```
ON/OFF TIMER

EVERY MON-FRI
01:00AM _H CH___

SET THE TIME.
PLEASE USE [0-9]
&[ENTER].
```

6 Press ENTER.

```
ON/OFF TIMER

EVERY MON-FRI
01:00AM _H CH___

SELECT AM OR PM.
PLEASE USE[+][-]
&[ENTER].
```

7 Press +/– to set AM or PM.

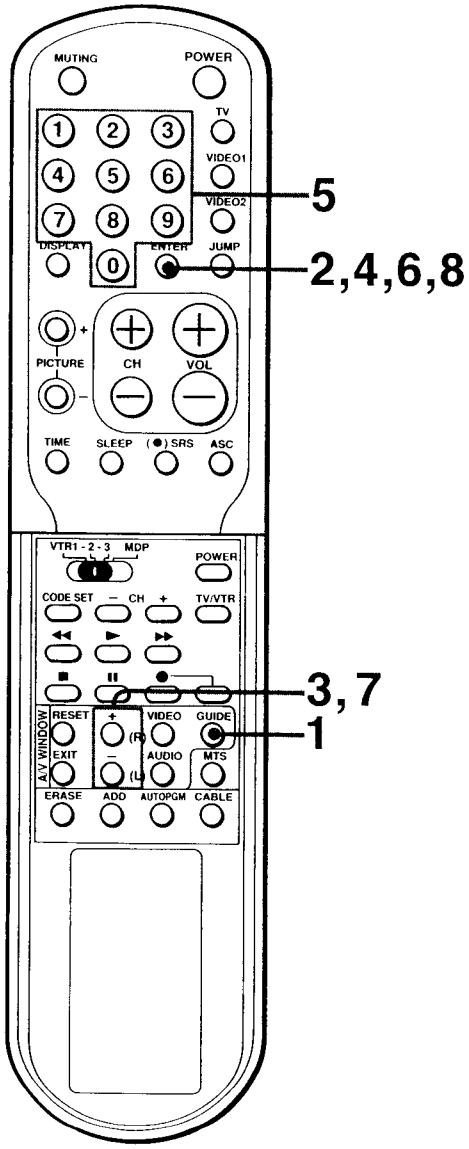



```
ON/OFF TIMER

EVERY MON-FRI
01:00PM _H CH___

SELECT AM OR PM.
PLEASE USE[+][-]
&[ENTER].
```

8 Press ENTER.

```
ON/OFF TIMER

EVERY MON-FRI
01:00PM _H CH___

SET THE DURATION.
PLEASE USE [0-9]
&[ENTER].
```

(cont'd. on next page)



Setting the ON/OFF TIMER

Set the ON/OFF TIMER to make the program of your choice appear on the screen at the desired time.

Example: Set the timer to turn on the TV to channel 8 for 3 hours, from 1:00 PM every Monday through Friday.

1 Press GUIDE.
Press repeatedly until the "ON/OFF TIMER" display turns red.

GUIDE

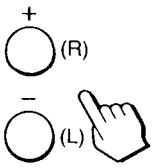
```
GUIDE

CURRENT TIME SET
ON/OFF TIMER
CHANNEL BLOCK
VIDEO I.D.
CHANNEL CAPTION
```

2 Press ENTER.
Instructions for selecting the day appear.
(If the clock has not been set, the display "PLEASE SET THE CURRENT TIME FIRST" will appear on the screen.
Go back to page 20 — "Setting the Clock".)

ENTER

```
ON/OFF TIMER

EVERY SUN-SAT
--:--AM -H CH---

SELECT THE DAY.
PLEASE USE[+][-]
&[ENTER].
```

3 Press the A/V WINDOW +/– buttons to select the day of the week.
(See illustration on p. 25)



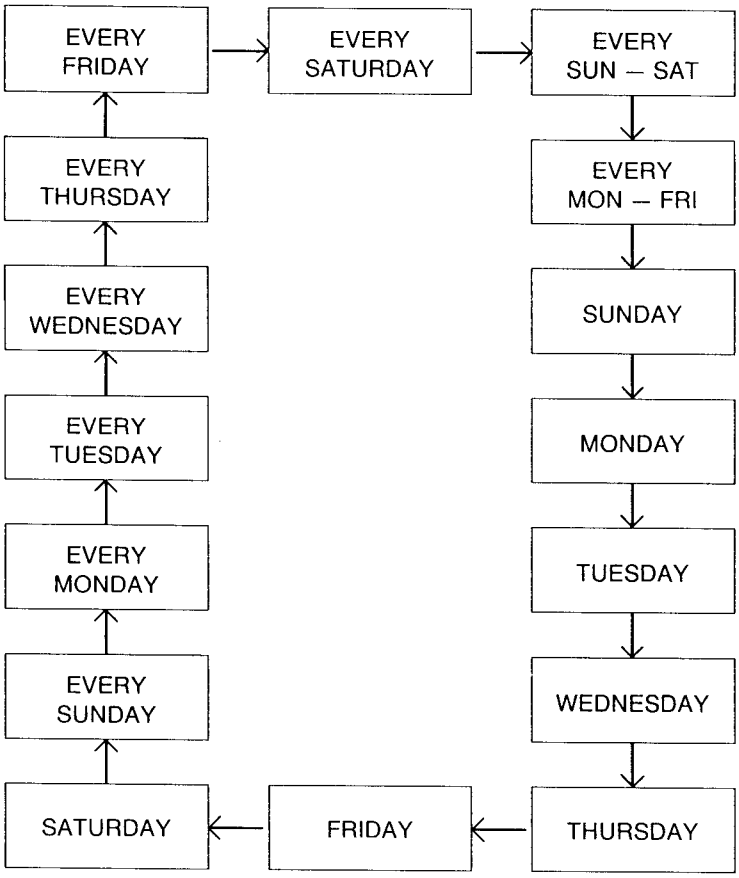

```
ON/OFF TIMER

EVERY MON-FRI
--:--AM -H CH---

SELECT THE DAY.
PLEASE USE[+][-]
&[ENTER].
```

4 Press ENTER.
Instructions for setting the time appear.

ENTER

```
ON/OFF TIMER

EVERY MON-FRI
--:--AM -H CH---

SET THE TIME.
PLEASE USE [0-9]
&[ENTER].
```

When you press AV/WINDOW + button, the selectable days will appear in the following order. (See step 3, p. 22.)



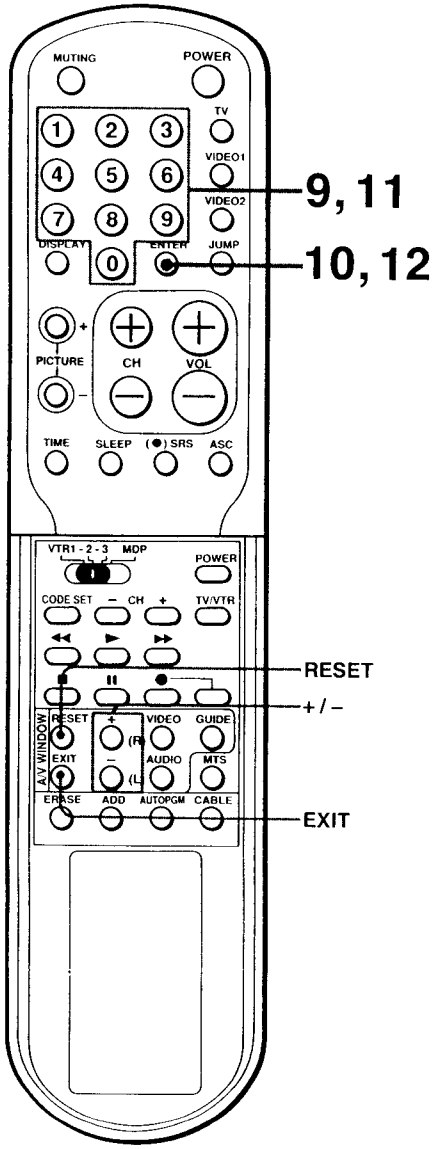
Press the A/V WINDOW – button to move in the reverse direction.

To clear the setting
Call the "ON/OFF TIMER" page (steps 1 and 2, p. 22). Press RESET, then EXIT.

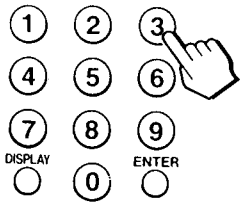
To reset the setting
Call the "ON/OFF TIMER" page (p. 22). Press RESET, then repeat steps 3 to 12.

To restore the normal picture
Press EXIT.

Notes
- The "TIMER WILL BE OFF" display will appear on the screen one minute before the timer goes off.
- If you unplug the TV, or a power failure occurs, both the clock and timer settings will be erased. Reset the current time, then set the timer.



9 Press 0 – 9 to set the duration (up to 9 hours).

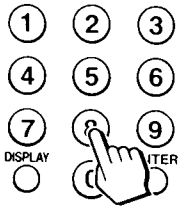



```
ON/OFF TIMER

EVERY MON-FRI
01:00PM 3H CH___

SET THE DURATION.
PLEASE USE [0-9]
&[ENTER].
```

10 Press ENTER.

```
ON/OFF TIMER

EVERY MON-FRI
01:00PM 3H CH___

SET THE CHANNEL.
PLEASE USE [0-9]
&[ENTER].
```

11 Press 0 – 9 to set the desired channel number.

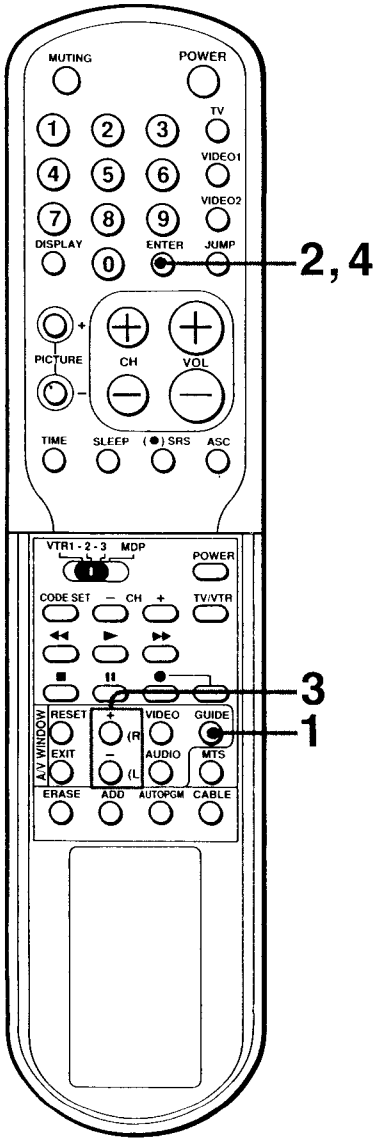



```
ON/OFF TIMER

EVERY MON-FRI
01:00PM 3H CH__8

SET THE CHANNEL.
PLEASE USE [0-9]
&[ENTER].
```

12 Press ENTER.

The following display will appear on the screen, and the TIMER indicator lamp on the TV will light up, showing that the ON/OFF TIMER has been set.

```
ON/OFF TIMER

EVERY MON-FRI
_1:00PM 3H CH__8

ON/OFF TIMER IS
SET. THANK YOU.
```



Setting VIDEO I.D.

Use this function to identify the type of video equipment connected to the VIDEO 1 and VIDEO 2 IN jacks.

1 Press GUIDE.
Press repeatedly until the "VIDEO I.D." display turns red.

GUIDE

```
GUIDE

CURRENT TIME SET
ON/OFF TIMER
CHANNEL BLOCK
VIDEO I.D.
CHANNEL CAPTION
```

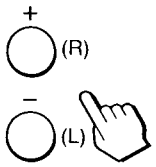
2 Press ENTER.

ENTER

```
VIDEO I.D.

VIDEO 1: VIDEO 1
VIDEO 2: VIDEO 2

PLEASE USE[+][-]
&[ENTER].
```

Display is red

3 Press the A/V WINDOW +/– buttons to select the I.D. for VIDEO 1 (p. 28).




```
VIDEO I.D.

VIDEO 1: S VIDEO
VIDEO 2: VIDEO 2

PLEASE USE[+][-]
&[ENTER].
```

Display is red

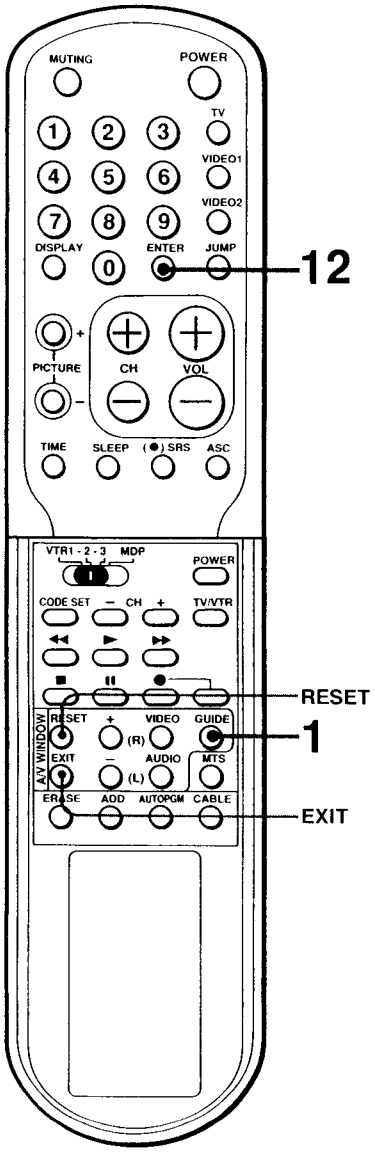
4 Press ENTER.

ENTER

```
VIDEO I.D.

VIDEO 1: S VIDEO
VIDEO 2: VIDEO 2

PLEASE USE[+][-]
&[ENTER].
```

Display is red

(cont'd. on next page)



Setting CHANNEL BLOCK

CHANNEL BLOCK prevents a channel from appearing on the screen during the time that you set. We suggest that you use this function to prevent children from watching undesirable programs.

Example: Set CHANNEL BLOCK for 1 hour, at 4:00 PM every Saturday, on channel 12.

1 Press GUIDE.
Press repeatedly until the "CHANNEL BLOCK" display turns red.

GUIDE

```
GUIDE

CURRENT TIME SET
ON/OFF TIMER
CHANNEL BLOCK
VIDEO I.D.
CHANNEL CAPTION
```

2–11 Same as Setting the ON/OFF TIMER (pp. 22 – 24)

12 Press ENTER
The following display will appear, indicating that CHANNEL BLOCK has been set.
At the preset time, the picture of the selected channel will be blocked from view, and the sound will be muted. A red "BLOCKED" display will appear on the screen while the channel is blocked.

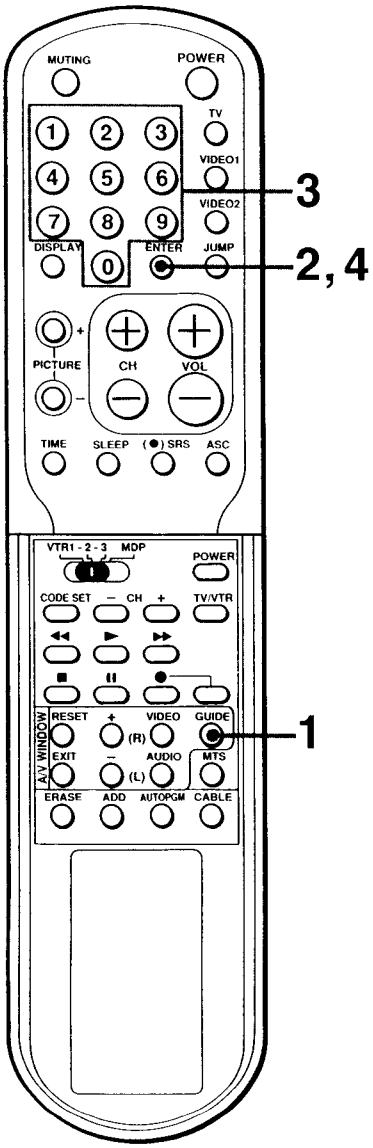
ENTER

```
CHANNEL BLOCK

EVERY SATURDAY
_4:00PM 2H CH_12

CHANNEL BLOCK IS
SET. THANK YOU.
```

To clear the setting
Call up the "CHANNEL BLOCK" page (steps 1 and 2). Press RESET, then EXIT.

To reset the setting
Call up the "CHANNEL BLOCK" page, then repeat steps 1 through 12.

To restore the normal picture
Press EXIT.



Setting CHANNEL CAPTION

Use this function to caption each channel number display with the channel call letters.

1 Press GUIDE.
Press repeatedly until the "CHANNEL CAPTION" display turns red.

GUIDE

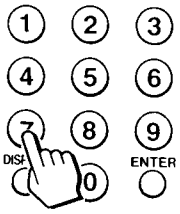
```
GUIDE

CURRENT TIME SET
ON/OFF TIMER
CHANNEL BLOCK
VIDEO I.D.
CHANNEL CAPTION
```

2 Press ENTER.

ENTER

```
CHANNEL        ___
CAPTION        ____

ENTER THE CH
TO BE CAPTIONED.
PLEASE USE [0-9]
& [ENTER].
```

3 Press the 0 – 9 buttons to select the channel number you want to caption.



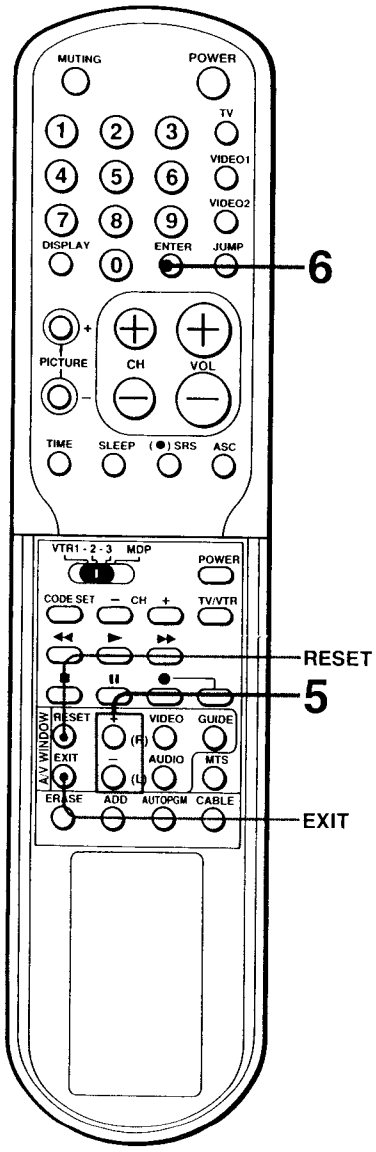

```
CHANNEL        __7
CAPTION        ____

ENTER THE CH
TO BE CAPTIONED.
PLEASE USE [0-9]
& [ENTER].
```

4 Press ENTER.

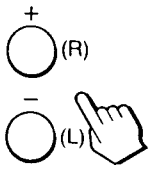
ENTER

```
CHANNEL        __7
CAPTION        ____

SELECT THE 1ST
LETTER.
PLEASE USE [+] [-]
& [ENTER].
```

(cont'd. on next page)



5 Press the A/V WINDOW +/– buttons to select the I.D. for VIDEO 2. (See chart below).




```
VIDEO I.D.

VIDEO 1:  S VIDEO
VIDEO 2:      8mm

PLEASE USE[+][-]
&[ENTER].
```

Display is red

6 Press ENTER.
A display will appear indicating the VIDEO I.D. has been set.

```
VIDEO I.D.

VIDEO 1:  S VIDEO
VIDEO 2:      8mm

VIDEO I.D.  IS
SET.  THANK  YOU.
```

Setting the I.D.

Each time you press A/V WINDOW +, the I.D. will change in the following order:

VIDEO 1 I.D. Settings

VIDEO 1 → BETA → 8 mm → VHS → LD → S VIDEO

VIDEO 2 I.D. Settings

VIDEO 2 → BETA → 8 mm → VHS → LD

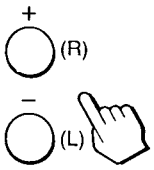
To move in the reverse direction
Press A/V WINDOW –.

To clear the setting
Call the "VIDEO I.D." screen (steps 1 and 2, p. 27). Press RESET, then EXIT.

To reset the setting
Call the "VIDEO I.D." screen, then repeat steps 1 – 6.

To restore the normal picture
Press EXIT.

9 Press the A/V WINDOW +/– buttons to choose the third letter of the caption.

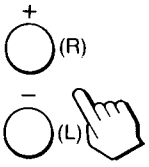



```
CHANNEL        __7
CAPTION       ESP_

SELECT THE 3RD
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

10 Press ENTER.

```
CHANNEL        __7
CAPTION       ESP_

SELECT THE 4TH
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

11 Press the A/V WINDOW +/– buttons to choose the fourth letter of the caption.




```
CHANNEL        __7
CAPTION       ESPN

SELECT THE 4TH
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

12 Press ENTER.
The channel caption is set.

```
CHANNEL        __7
CAPTION       ESPN

PRESS[+]FOR MORE
```

To set more captions
Press A/V WINDOW +, then repeat steps 3 – 12.

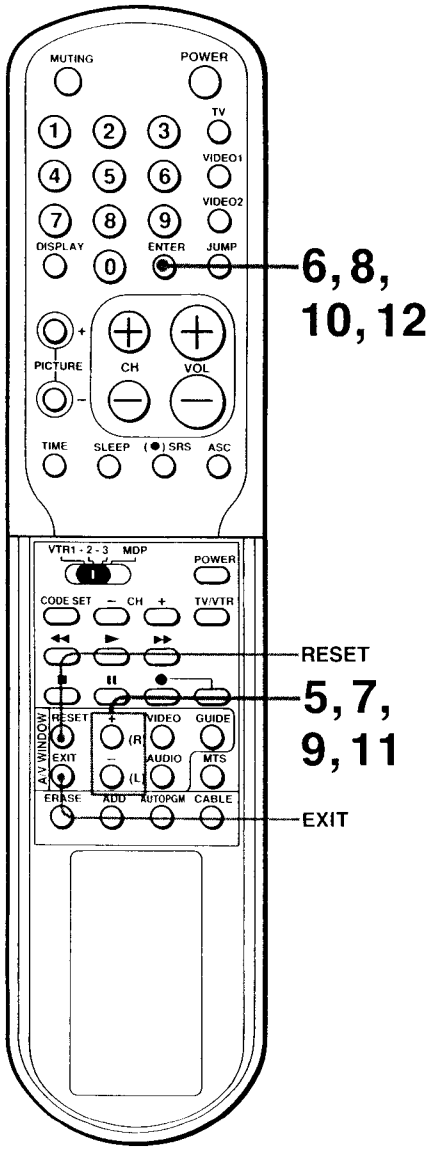
To clear the setting
Call up the "CHANNEL CAPTION" screen and press RESET, then EXIT.

To reset the setting
Call up the "CHANNEL CAPTION" screen. Press RESET, then repeat steps 3 – 12.

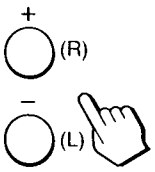
To restore the normal picture
Press EXIT.

Notes

- If you want to leave a blank space in the channel number or caption, press ENTER without pressing A/V WINDOW +/–.
- You can enter up to 32 channel captions.



5 Press the A/V WINDOW +/– buttons to choose the first letter of the caption.

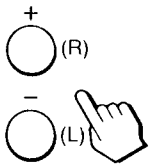



```
CHANNEL        __7
CAPTION       E___

SELECT THE 1ST
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

6 Press ENTER.

```
CHANNEL        __7
CAPTION       E___

SELECT THE 2ND
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

7 Press the A/V WINDOW +/– buttons to choose the second letter of the caption.




```
CHANNEL        __7
CAPTION       ES__

SELECT THE 2ND
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

8 Press ENTER.

```
CHANNEL        __7
CAPTION       ES__

SELECT THE 3RD
LETTER.
PLEASE USE[+][-]
&[ENTER].
```

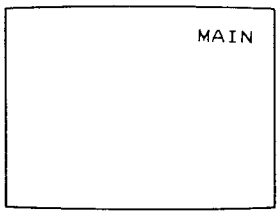
Receiving a Multichannel TV Sound program — MTS

Each time you press MTS, the MAIN, SAP (Second Audio Program) and MONO modes are selected in sequence. The display (in green) for each mode will appear on the screen for a few seconds.
(NOTE: During SAP modes, the sound of non-SAP programs will be muted.)

To listen to stereo sound

Press MTS to select MAIN mode.

The MAIN display will appear on the screen.
The STEREO indicator lamp on the TV will light up whenever a stereo broadcast is received.

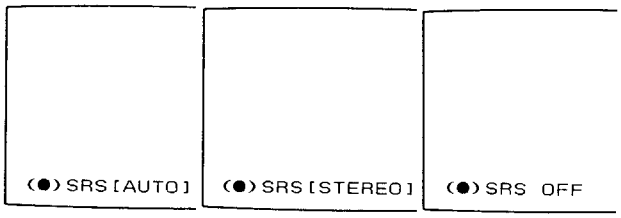


Note

A weak incoming signal may cause excessive noise with some stereo broadcasts. Select MONO mode to eliminate this noise.

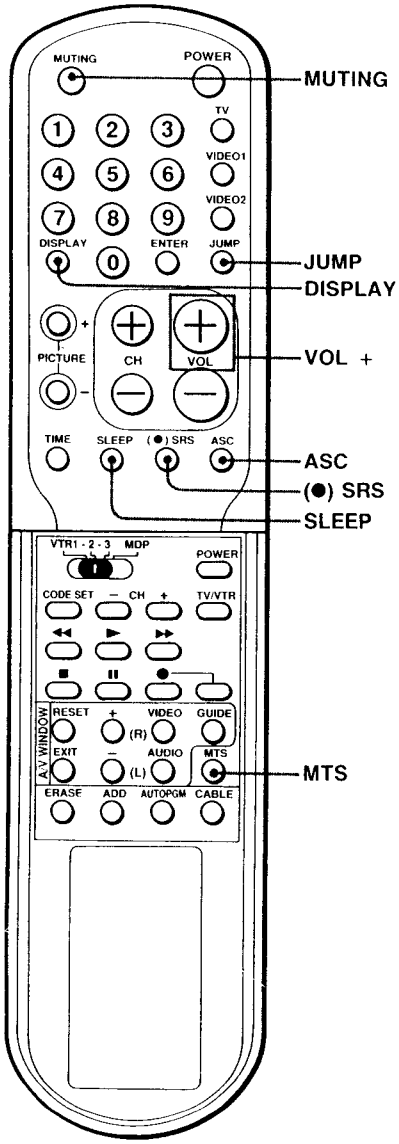
Receiving lifelike sound reproduction — (●) SRS

SRS (Sound Retrieval System) allows you to select the sound mode you prefer. Each time you press (●) SRS, "(●) SRS [AUTO]," "(●) SRS [STEREO]," *and* "(●) SRS OFF" *modes are selected in sequence.*



In (●) SRS [AUTO] mode, SRS functions in both monaural and stereo modes. Monaural sound programs will have a 'simulated stereo' effect.
In (●) SRS [STEREO] mode, SRS functions only when a stereo program is received.

Enjoying Other Useful Features



Muting the sound—MUTING

Press MUTING.

The display "MUTING" will appear on the screen.

To restore the sound

Press MUTING again, or press VOL +.

Keeping the channel displayed — DISPLAY

To display the channel

Press DISPLAY.

The channel number, channel caption and MTS mode displays will appear for a few seconds, then disappear. The channel display will remain on the screen.

To cancel the display

Press DISPLAY again.

The channel display will disappear.

Using the sleep timer — SLEEP

Turns TV off automatically about 1 hour after setting.

Press SLEEP.

A green "SLEEP ON" display appears for a few seconds.

A red "SLEEP" display will appear 1 minute before the TV shuts off.

To cancel the setting

Press SLEEP again.

A green "SLEEP OFF" display appears for a few seconds.

OR

Turn the TV off.

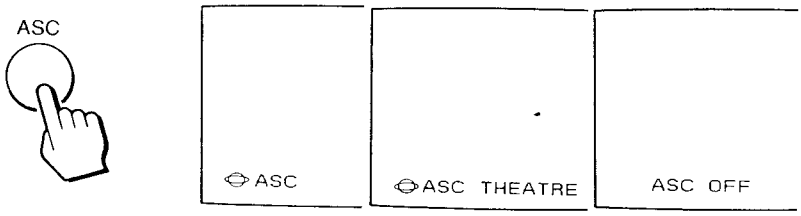
The sleep timer setting will be cancelled.

Switching quickly between 2 channels — JUMP

Press JUMP once to recall the channel you were watching previously; press JUMP again to switch back. Use this feature to keep track of two programs alternately.

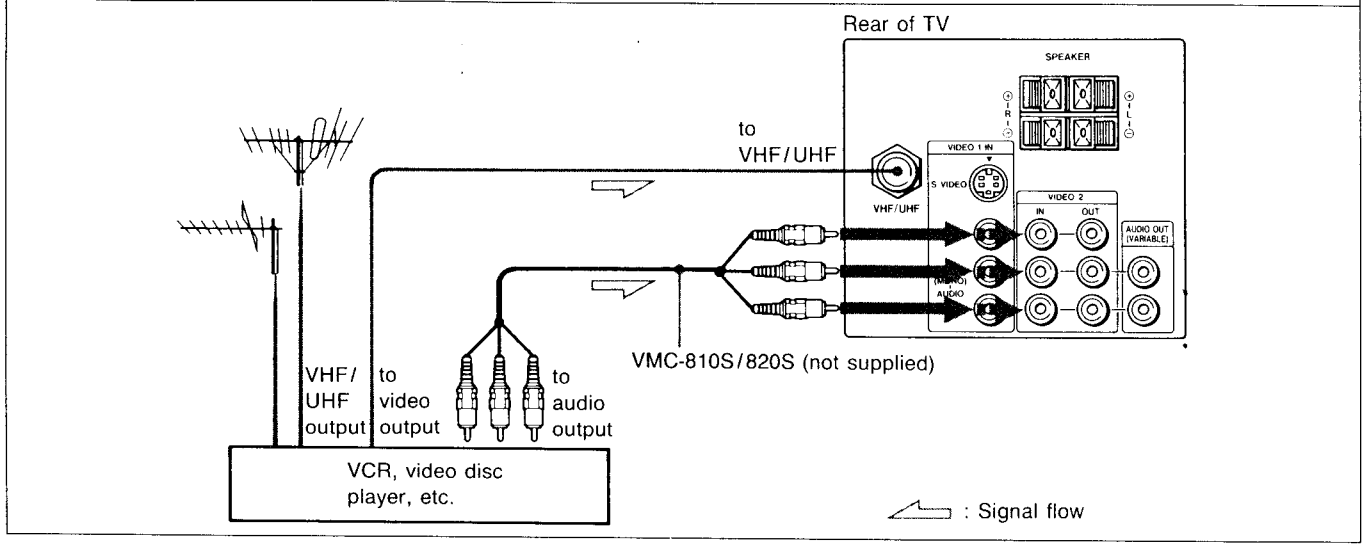
Choosing the picture mode — ASC (Active Signal Correction)

Each time you press ASC, "⊖ASC," "⊖ASC THEATRE" and "ASC OFF" are selected in sequence.



Select "⊖ASC" mode for a vivid picture.
Select "⊖ASC THEATRE" mode for an easy to watch picture. Choose this mode to watch the TV for a long period of time, or in a darkened room.

Connecting a VCR/video disc player, etc. not equipped with an S video output jack



Preparing for use

1 Turn on the TV.

2 Press the TV/VIDEO button on the TV or an input select button on the Remote Commander so that "VIDEO 1" or "VIDEO 2" appears on the screen.

VIDEO 1: for equipment connected to VIDEO 1 IN
VIDEO 2: for equipment connected to VIDEO 2 IN

To view one TV program while recording another
Press the TV/VTR mode select button on the VCR or Remote Commander so that the VCR is in TV mode. Press the TV button on the Remote Commander, and select the channel you want to view.

When you cannot obtain a clear picture and/or sound
Make sure that the TV/VTR mode select button on the VCR is set to TV. Reselect the desired channel with the buttons on the TV or the Remote Commander.

Operating your equipment

When using a Sony infrared remote control VCR, video disc player or multi disc player, the equipment can be operated with the Remote Commander supplied with the TV.

1 Set the VTR 1/2/3/MDP selector to the appropriate position according to the equipment you want to operate.

VTR 1: Sony Betamax VCR
VTR 2: Sony 8 mm VCR
VTR 3: Sony VHS VCR
MDP: Sony video disc player or multi disc player

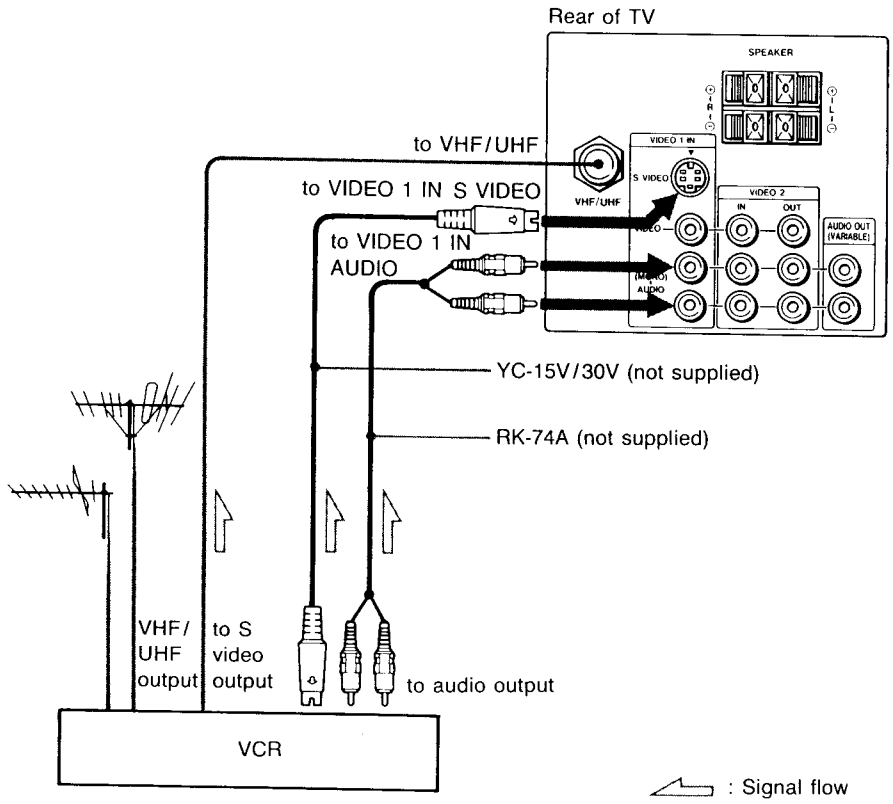
2 Operate the equipment with the VCR/multi disc player operation buttons on the Remote Commander.

To return to TV mode
– Press the TV/VIDEO button on the TV so that a channel number appears on the screen.
– Press the TV button on the Remote Commander.

Connecting Video Equipment

After connecting, you will be able to ... – Play back video tapes
– Record TV programs
– Record one TV program while viewing another

Connecting a VCR with an S video output jack



Notes

- If you connect a monaural VCR, connect the audio output of the VCR to the L (MONO) jack of VIDEO 1/2 IN on the TV. The monaural sound will be heard from both speakers.
- For operating instructions, refer to the instruction manual furnished with the VCR.
- If the picture or sound is affected, move the VCR away from the TV.

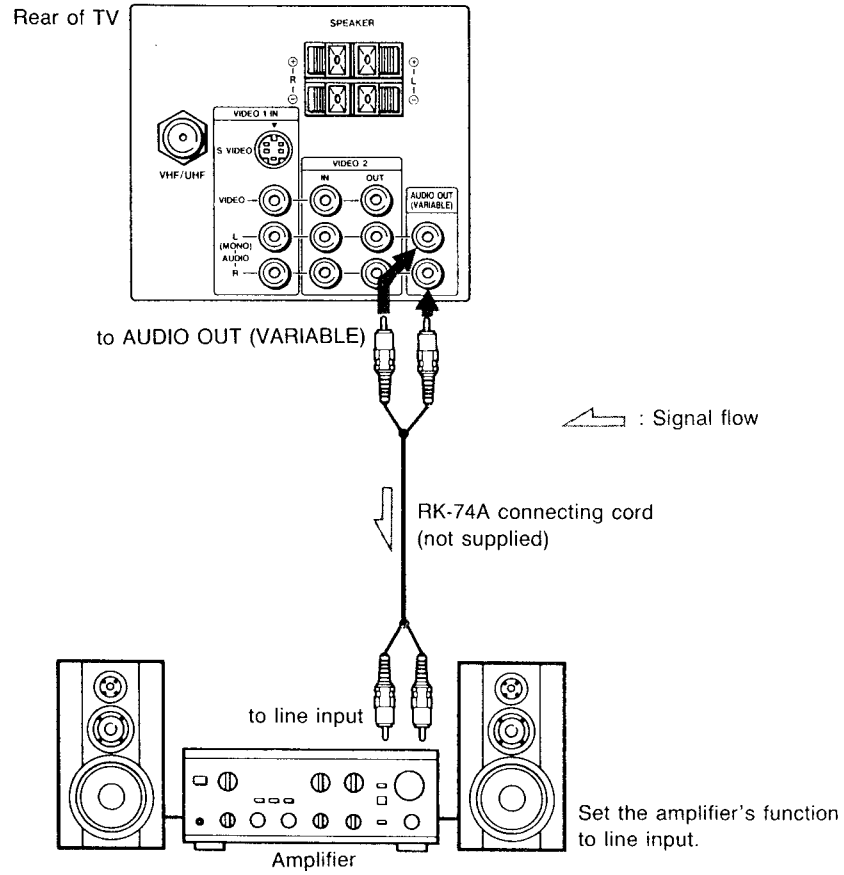
About S video input

Video input and output signals can be separated into Y (luminance or brightness) and C (chroma or color) signals. Usually these two signals are combined in a VCR and sent as one signal to a TV. Separation of the Y and C signals prevents them from interfering with one another, thereby improving picture (especially color) quality.

This TV is equipped with an S video input jack through which these separated signals can be input directly.

Connecting an Audio System

Listening to TV or connected VCR sound through an audio system



Adjusting the sound level

Leave the amplifier volume, bass and treble controls at their mid position and adjust the level with the VOLUME +/– buttons on the TV or the VOL +/– buttons on the Remote Commander.

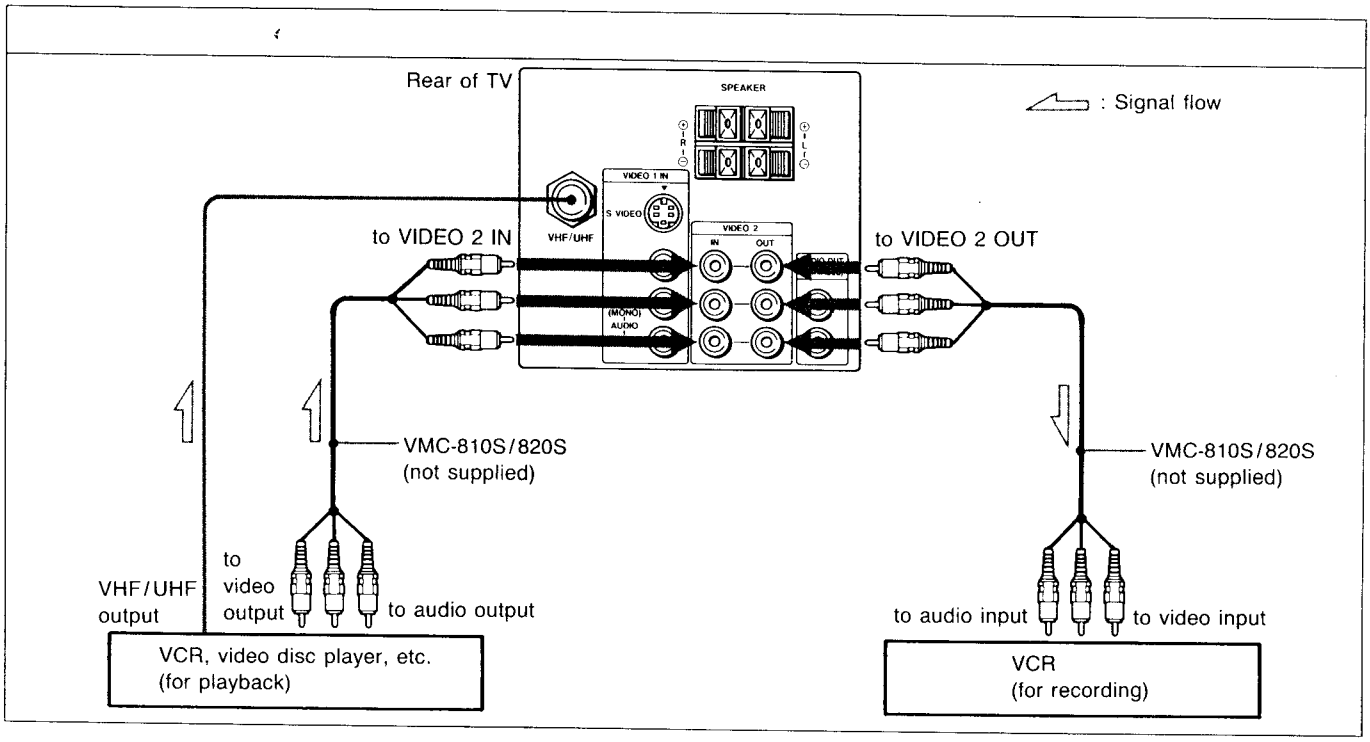
Note
You can choose the AUDIO-OUT VAR or FIX modes by selecting SPEAKER OFF (p. 17).

Selecting SPEAKER OFF

Turn the TV speakers off when you connect an audio system to your TV.

1. Press AUDIO on the Remote Commander.
   Press repeatedly until the SPEAKER setting of the AUDIO menu turns red.

2. Press A/V WINDOW – to select SPEAKER OFF.
   The sound from the TV's speakers will be cut off.



Preparing for tape editing

1 Press TV/VIDEO on the TV or VIDEO 2 on the Remote Commander so that "VIDEO 2" appears on the screen.

2 Set the playback VCR to the playback mode and the recording VCR to the recording mode.

Note on tape editing
The video signal input from the equipment connected to the VIDEO 2 IN jacks is directly output from VIDEO 2 OUT even when the TV is OFF. The video signal input from VIDEO 1 IN is not output from VIDEO 2 OUT. To edit the tape, use the VIDEO 2 IN and OUT jacks.

Specifications & Troubleshooting

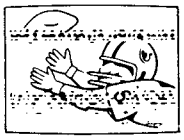
Specifications

Television system American TV standards
Channel coverage VHF: 2 – 13
UHF: 14 – 69
Cable TV: 1 – 125
Picture tube Microblack™ Trinitron® tube
27-inch picture measured diagonally
28-inch picture tube measured diagonally
Antenna 75-ohm external antenna terminal for VHF/UHF
Input VIDEO 1 and 2 IN
S VIDEO IN (4-pin mini DIN)
Y: 1 Vp-p, 75-ohms unbalanced, sync negative
C: 0.286 Vp-p (Burst signal), 75-ohms
Video (phono jacks): 1 Vp-p, 75-ohms unbalanced, sync negative
Audio (phono jacks): 500 mVrms (100% modulation)
Impedance: 47 kilohms
Output VIDEO 2 OUT
Video (phono jack): 75-ohms unbalanced, sync negative
Audio (phono jacks): Impedance: 10 kilohms
AUDIO OUT (VARIABLE) (phono jacks)
More than 408 mVrms at the maximum volume setting (variable)
Impedance: 5 kilohms
Speaker output 5 W × 2
Power requirements 120 V AC, 60 Hz
Power consumption Maximum: 165 W
Standby: 1.5 W
Dimensions (h/w/d) 595 × 683 × 573.5 mm
(23 1/2 × 27 × 22 5/8 inch)
Supplied accessories
Remote commander RM-Y105 with 2 size AA (R6) EVEREADY batteries (1)
Antenna connector (1)
Terminal cover (1)
Recommended accessories
U/V mixer EAC-66
Connecting cable VMC-810/820S, YC-15V/30V
Video rack SU-27EX1

Design and specifications are subject to change without notice.

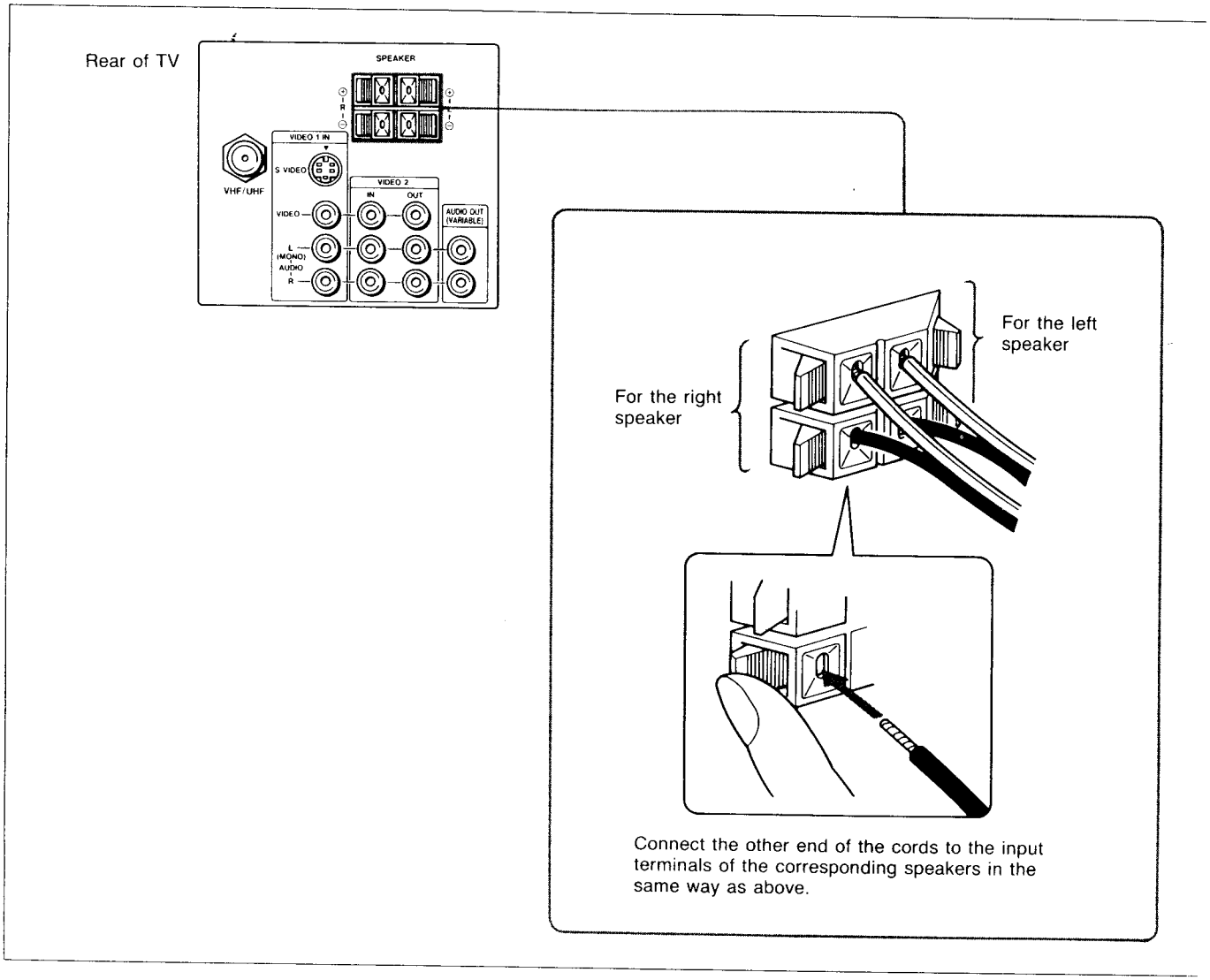
Troubleshooting

Disturbances in picture and sound can often be eliminated by checking the symptoms and following the suggestions listed below.

SYMPTOM	CHECK AND ADJUST
Poor or no picture (screen not lit), good sound	• Adjust PICTURE. • Adjust BRIGHT. • Check antenna/cable connections.
Good picture, no sound	• Press VOLUME + on the TV or VOL + on the Remote Commander. • Press MUTING on the Remote Commander. • Check that the MTS button is set correctly. • Check that the TV/VIDEO button is set correctly. • Check that "SPEAKER ON" is set. • Check that the speaker cords are connected to the SPEAKER terminals.
No picture (screen not lit), no sound	• Is POWER switched on? • Plug the unit into a wall outlet. • Check that the TV/VIDEO button is set correctly.
No color	• Is it a color program? • Adjust COLOR.
Snow and noise only	• Is it an active or the correct channel? • Check the CABLE setting. • Check antenna/cable connections.
 **Dotted lines or stripes**	This is often caused by local interference. (e.g. cars, neon signs, hairdryers etc.) Adjust the antenna for minimum interference.
Double images or ghosts	Reflections from nearby mountains or buildings often cause this problem. A highly directional outdoor antenna or a CATV cable may improve the picture.
Try another channel. It could be station trouble.	

If the problem persists, contact your nearest service facility.

Connecting Extra (not supplied) External Speakers



Note
Remove the speaker cords of the TV from the SPEAKER terminals before connecting external speakers.

Phasing
Correct ⊕ ⊖ connection of both speaker systems ensures proper in-phase operation. If the speaker system is out-of-phase, the bass tones seem to be missing and the position of the instruments is obscured.

Caution

- If you connect external speakers, they must be rated at over 8-ohm impedance (with normal power holding capacity of more than 5 W).
- Unplug the TV while making these connections. If the exposed speaker cord wires touch while the TV is connected, the TV may short-circuit and be damaged.
- Do not pull on the speaker cords.